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BIBLIOGRAPHY OF THE RELATION OF SECONDARY SCHOOLS TO HIGHER EDUCATION

Compiled by
RAYMOND LOWREY [illegible]LKLEY

DEPARTMENT OF THE INTERIOR

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, D. C., December 12, 1913.

Sir: Within recent years there has been an extensive discussion of the relation of secondary to higher education and of the high school to the college. With an increase in the number of high schools and high-school students, and with the awakened desire for a greater economy in education and more definite standards, this relation has become still more important. That future discussions of the subject may the more certainly lead to valuable and practical results, there is need for some comprehensive bibliography of it, such as that transmitted herewith for publication as a bulletin of the Bureau of Education. This bibliography was compiled by Mr. Raymond Lowrey Walkley, of the New York State Library School, and was completed and brought up to date by him while he was a member of the Library Division of this bureau.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

PREFATORY NOTE.

In the preparation of this bibliography the aim has been to include only discussions of the subject, and not purely formal documents and reports, such as statements of entrance requirements or recommended courses of study, except when these are arranged in comparative form, or accompanied by a valuable discussion. No attempt has been made to include material relating to particular institutions, and for this reason college, city, and State reports have not been examined.

Nearly all the material published within the past 10 years has been included; in relation to articles published before that time, care has been taken to make the list select, and only the most accessible and important of the older articles have been included. On this account recent articles are more fully annotated, especially where the title does not seem to define the scope sufficiently.

The articles are grouped by subject, and in each division the arrangement is chronological, in order to show as far as possible the historical development of interest. This brings the latest articles on the subject at the end of each division.

BIBLIOGRAPHY OF THE RELATION OF SECONDARY SCHOOLS TO HIGHER EDUCATION.

I. BIBLIOGRAPHY.

1. Report of the Committee of ten: bibliography. *In* U. S. Bureau of education. Report of the Commissioner, 1892–93. v. 2, p. 1491–94.
2. References on convocation topics: what do the colleges want of the secondary schools? *In* New York (State). University. University convocation. Proceedings, 1895. p. 965–66. *Also in its* Annual report of the Regents, 1895. v. 2, p. 965–66.
3. **Carnagey, J. A.,** *comp.* Bibliography of secondary school literature. *In* Indiana. Town and city superintendents' association. Report of the Committee on course of study in the public high schools. 1899. p. 63–93.
4. **Broome, E. C.** Bibliography. *In his* Historical and critical discussion of college admission requirements. 1903. p. 153–57.
   References not specific.
5. **Locke, G. H.** A bibliography of secondary education: being a classified index of the School review, volumes I–X. Chicago, University press, 1903. 41 p. 8°.
   p. 31–35, High school and college.
6. **Harvard university. Associated Harvard clubs.** Selected list of articles dealing with examination system and the inspection and certificate system of admission to college. *In its* Relation of Harvard university to schools for secondary education. 1906. Appendix 2, 16 p.
   Lists and reviews 31 articles on both sides.
7. **National education association.** Bibliography of topics from 1857–1907. *In its* Fiftieth anniversary volume. 1906.
   College-entrance requirements, p. 672. Higher education—colleges and universities, p. 687–90. Secondary education—high schools, p. 720–21.
8. **Brown, J. F.** References [on the function of the high school]. *In his* American high school. 1909. p. 85–89.
   Includes the relations of the high school to elementary and higher schools, to the pupil, and to the state.
9. The articulation of high school and college. References to recent publications. *In* U. S. Bureau of education. Report of the Commissioner, 1910. v. 1, p. 29–32.
   List of 50 articles and papers published 1908–1910.
10. **Brown, E. E.** Bibliography. *In his* Making of our middle schools. 1910. p. 481–518.
11. **Moore, F. W.,** *comp.* The administration of the certificating system of admission into college: bibliography. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1910. p. 78–81.
12. **Henderson, J. L.** Bibliography. *In his* Admission to college by certificate. 1912. p. 170–71.
13. **Carpenter, G. R., Baker, F. T.,** *and* **Scott, F. N.** Bibliography: college entrance requirements. *In their* Teaching of English in the elementary and the secondary school. New ed. 1913. p. 283, 347–50, 377–78.

II. GENERAL.

(1845–1889.)

14. **Hammond, Charles.** The relation of common schools to higher seminaries. *In* Massachusetts teachers' association. Transactions; vol. 1, 1845–47. p. 221–60.

15. **Hammond, Charles.** New England academies and classical schools. American journal of education, 16: 403–29, September 1866. *Also in* U. S. Bureau of education. Report of the Commissioner, 1867–68. p. 403–29; Massachusetts. Board of education. 40th annual report, 1875–76. appendix, p. 182–207.

16. **Barnard, F. A. P.** On the studies proper to be pursued preparatory to admission to college. *In* New York (State). University. University convocation. Proceedings, 1866. p. 29–52. *Also in its* Annual report of the Regents, 1867. p. 579–602.

17. **Edson, H. K.** The academy and its relation to the college. Congregational review, 11: 50–63, January 1871.

    Compares academy and high school training.

18. Relation of secondary schools to the colleges and schools of science. *In* U. S. Bureau of education. Report of the Commissioner, 1873. introduction, p. 48–54.

19. **Bancroft, C. F. P.** The relations of the colleges and the secondary schools. *In* New York (State). University. University convocation. Proceedings, 1874. p. 165–73. *Also in its* Annual report of the Regents, 1875. p. 695–703.

20. **Porter, Noah.** Preparatory schools for college and university life. *In* National education association. Journal of proceedings and addresses, 1874. p. 42–58. *Also in his* American colleges and the American public. [1878.] p. 283–313.

21. **Thurber, Samuel.** The relation of public high schools to colleges. *In* New York (State). University. University convocation. Proceedings, 1875. p. 129–41. *Also in its* Annual report of the Regents, 1876. p. 603–15.

22. **Penfield, C. H.** The high school and the college. *In* Northeastern Ohio teachers' association. Essays and addresses, 1876. p. 252–69.

23. **Webb, W. R.** Relation of the preparatory or grammar school to college or university. *In* National education association. Journal of proceedings and addresses, 1877. p. 70–78.

24. **Dimm, J. R.** The relations of the public schools to the colleges. Lutheran quarterly, 9: 28–46, January 1879.

25. **McCosh, James.** The importance of harmonizing the primary, secondary and collegiate systems of education. *In* National education association. Journal of proceedings and addresses, 1880. p. 138–46

26. **Harris, W. T.** On the relation of the college to the common school. *In* American institute of instruction. Annual meeting, 1883. p. 139–71. Discussion, p. 171–83.

27. Collegiate influence upon the lower education. (Editorial.) Popular science monthly, 24: 702–6, March 1884.

    Summary of existing opinions.

28. **West, A. F.** The relation of secondary education to the American university problem. *In* National education association. Journal of proceedings and addresses, 1885. p. 195–213.

    Includes comparative tables illustrating the character of secondary instruction in United States, France, and Prussia.

29. **Hewett, W. T.** The mutual relations of the colleges and academies. *In* New York (State). University. University convocation. Proceedings, 1886. p. 249–60. Discussion, p. 260–64. *Also in its* Annual report of the Regents, 1887. p. 249–64. *Also in* Academy, 1: 361–72, January 1887.

30. Conference on the requirements for admission to college. *In* New York (State) University. University convocation. Proceedings, 1887. p. 161–98. *Also in its* Annual report of the Regents, 1888. p. 161–98.

    Consists of brief addresses on various topics, most of them relating to special subjects in the course of study.

31. **Coy, E. W.** The relation of high schools to colleges. *In* National education association. Journal of proceedings and addresses, 1887. p. 282–88. Discussion, p. 288–91.

    Report of the committee on secondary education.

32. The relation of the university, college, and higher technical schools to the public system of instruction. *In* National education association. Journal of proceedings and addresses, 1887. p. 146–78.

    Papers by J. B. Angell, on the university, J. W. Strong, on the Christian college, I. Hopkins, on the technological schools, T. H. McBride, and discussion.

33. **Harris, W. T.** On the necessity of colleges to supplement the high schools. Ohio educational monthly, 37: 435–51, August 1888.

(1890–1899.)

34. **Butler, N. M.** The function of the secondary school. Academy, 5: 131–48, April 1890. *Also in his* Meaning of education. 1898. p. 151–83.
35. **Eliot, C. W.** The gap between common schools and colleges. *In* National education association. Journal of proceedings and addresses, 1890. p. 522–33. *Also in* Arena, 2: 24–38, June 1890. *Also in his* Educational reform. 1898. p. 197–219. *In abbreviated form in* U. S. Bureau of education. Report of the Commissioner, 1889–90. v. 2. p. 1112–16.
36. **Bechdolt, A. F.** The high school as a fitting school. *In* National education association. Journal of proceedings and addresses, 1890. p. 617–24.
37. **Johnson, J. W.** Demands of the high school for severance from the college and the university. *In* National education association. Journal of proceedings and addresses, 1890. p. 629–33.
38. The closer articulation of the school with the university. *In* New York state teachers' association. Proceedings, 1890. p. 107–11.

    Brief addresses by A. B. Blodgett and H. S. White.

39. **Edmands, M. G.** The modern university and the preparatory schools. Baptist quarterly review, 13: 583–91, January 1891.
40. **Cooper, O. H.** University and schools. *In* National education association. Journal of proceedings and addresses, 1891. p. 493–98.
41. Coordination of university, college and academy. *In* New York (State). University. University convocation. Proceedings, 1891. p. 388–421. (Regents' bulletin no. 8.) *Also in its* Annual report of the Regents, 1891. p. 388–421.

    Discussion opened by A. D. White.

42. **Ettinger, G. T.** The relations and duties of colleges to their preparatory schools. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1891. p. 30–33. *Also in* School and college, 1: 337–42, June 1892.

    Each college should have its own preparatory department and require higher standards of admission.

43. **Thomas, Isaac.** Some ways in which colleges may help secondary schools. Academy, 7: 140–53, April 1892.
44. **Atherton, G. W.** How can high schools be made so uniformly efficient that their graduates may without further preparation enter college? Proposals for the Middle states. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1892. p. 10–16.
45. **Burroughs, G. S.** The college in relation to secondary education. *In* Indiana college association. Proceedings, 1894. p. 33–47.

46. **Eliot, C. W.** The unity of educational reform. *In* American institute of instruction. Annual meeting, 1894. p. 151–73. *Also in* Educational review, 8: 209–26, October 1894. *Also in his* Educational reform. 1898. p. 315–39.

Enumerates the chief principles and objects of modern reform which are the same in the whole course of education from the fifth to the twenty-fifth year of life.

47. **Huling, R. G.** How may closer articulation between the secondary schools and higher institutions be secured? *In* New England Association of colleges and preparatory schools. Proceedings, 1894. p. 4–16. Discussion, p. 16–30. *Also in* School review, 2: 594–606, December 1894. Discussion, p. 606–22.

48. **Jesse, R. H.** What constitutes a college and what a secondary school. School review, 4: 274–84. Discussion, p. 284–96. May 1896.

Injury done to secondary schools by spurious colleges.

49. **Association of colleges and preparatory schools of the Middle states and Maryland.** Conference on college entrance requirements. Round table discussion. *In its* Proceedings, 1896. p. 71–105, 123–200.

Discussion centers mainly around the question of age of entrance, but takes up also the topic of concerted action to secure uniformity in requirements.

50. **Baker, J. H.** What should the college and university do for the graduate of the high school? *In* National education association. Journal of proceedings and addresses, 1896. p. 364–72. *Also in his* Education and life. 1900. p. 116–29.

How they can complete his education for practical life and still follow their highest ideals of culture.

51. **Tetlow, John.** The colleges and the nonclassical high schools. *In* American institute of instruction. Annual meeting, 1896. p. 3–28.

52. What is the present consensus of opinion as to the most important problems in preparatory and collegiate education? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1897. p. 34–85. *Also in* School review, 6: 145–82, March 1898.

Papers by Isaac Sharpless, comparing American and European conditions, and Julius Sachs, on teaching the classics, history, and English; discussion.

53. **Butler, N. M.** The scope and function of secondary education. Educational review, 16: 15–27, June 1898.

Discusses the disciplinary and selective purposes of secondary education as based on primary education and leading up to college.

54. **Tucker, W. J.** Relation of the high school to higher education. Education, 18: 579–87, June 1898.

55. **Slate, Frederick.** The relation of the university to secondary schools. California university chronicle, 1: 498–514, December 1898.

A comparison of conditions in England, Prussia, and America.

56. **Walker, F. A.** The secondary schools and higher education. *In his* Discussions in education. 1898. p. 323–330.

57. **Clement, W. K.** The northwestern state university and its preparatory school. Educational review, 17: 154–163, February 1899.

Taking the preparatory schools connected with seven state universities, paper describes their effect on secondary education and the college entrance requirements of each.

58. **Lange, A. F.** Should the university be the central authority in a unified school system? California university chronicle, 2: 180–89, August 1899.

Suggests a central administrative board for the trinitarian school system.

59. **Briggs, L. R.** The transition from school to college. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1899. p. 113–22. (New York (State). University. Regents' bulletin no. 50.) *Also in* Atlantic monthly, 85: 354–59, March 1900. *Also in his* School, college, and character. 1901. p. 127–48.

Describes the boy's dread of transition and its causes.

60. **Waters, W. E.** Intellectual and moral waste in the transition from school to college. *In* Association of colleges and preparatory schools of the Middle states

and Maryland. Proceedings, 1899. p. 122–33. Discussion, p. 133–36. (New York (State). University. Regents' bulletin no. 50.) *Also in its* Annual report of the Regents, 1899. p. 122–36.

Both school and college are responsible, but the solution rests in larger measure with the colleges.

61. **Woodward, F. C.** The correlation of colleges and preparatory schools. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1899. p. 54–63.

Plea for the abolition of the preparatory departments connected with the southern colleges.

(1900–1904.)

62. **Jesse, R. H.** The influence of the state university on the public schools. School review, 8: 466–74, October 1900.

Agencies and methods used by the university to articulate higher and lower education, especially in Missouri.

63. **Huling, R. G.,** *and others.* Problems which confront the high school. Education, 21: 129–43, November 1900.

The problems are: service; electives; how to reach the individual pupil; how to meet the demands of the colleges.

64. College defects from the high school standpoint. *In* New York (State). University. University convocation. Proceedings, 1900. p. 318–28. (Regents' bulletin no. 51.) *Also in its* Annual report of the Regents, 1900. p. 318–28.

Addresses by C. W. Evans and D. L. Bardwell.

65. **Hogue, Addison.** Should the Southern college association in its by-laws forbid preparatory departments and require entrance examinations for admission to college? *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1900. p. 14–21. Discussion, p. 21–26.

66. **Venable, F. P.** The universities and secondary schools. *In* Southern educational association. Journal of proceedings and addresses, 1900. p. 67–74. Discussion, p. 74–76.

How the state university can assist the schools.

67. **Randolph, Harrison.** The private college and the public school. *In* Southern educational association. Journal of proceedings and addresses, 1900. p. 221–30.

Discusses the antagonism of classical colleges to two tendencies prevalent in high schools: the too early beginning of education for practical life and the adjustment of school work to the likings of individuals.

68. **Hanus, P. H.** Preparation for college and for life. Educational review, 21: 140–152, February 1901. *Also in his* Modern school. 1904. p. 43–67.

"Sketches briefly the history of American secondary education, emphasizing especially those narrow congenital features which have so long delayed effective articulation with higher education."

69. **Gilbert, C. B.** The relation of the high school to the elementary school and to the college. School review, 9: 167–173, March 1901.

70. **Thurber, C. H.** The articulation of the secondary with the higher schools. Pedagogical seminary, 8: 382–89, September 1901.

From a Clark university doctor's thesis here published in part under the title, "The principles of school organization: a comparative study, chiefly based on the systems of the United States, England, Germany, and France."

71. **Harris, W. T.** Recent growth of public high schools in the United States as affecting the attendance of colleges. *In* National education association. Journal of proceedings and addresses, 1901. p. 174–80. Discussion, p. 180–81.

72. **Armstrong, J. L.** Preparatory training for girls, from the college standpoint. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1901. p. 47–55.

73. **Chase, W. J.** Current problems [in secondary education] from the standpoint of preparation for college. School review, 10: 28–32, January 1902.

74. **Farrand, Wilson.** The existing relations between school and college. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1902. p. 84–101. (New York (State). University. Regents' bulletin no. 60.) *Also in* Educational review, 25: 182–99, February 1903.

A general view of efforts being made to improve conditions.

75. **Saunders, P. H.** The outlook of the public high school in the South. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1902. p. 71–92. *Also in* School review, 11: 73–94, February 1903.

The mutual relations of college, high school, and pupils, to give satisfactory training to those who do not go to college as well as to those who do go.

76. **Balliet, T. M.** The time limit of secondary education. Educational review, 25: 433–37, May 1903.

77. **Brown, E. E.** Secondary education. *In* U. S. Bureau of education. Report of the Commissioner, 1903. v. 1, p. 553–83.

Contains (p. 569–74) sections on articulation; the accrediting system; College entrance examination board; development of the curriculum.

78. **Bryan, W. J. S.** What is the true function of the free public high school? *In* Northwestern university. National conference on secondary education. 1903. p. 51–55.

Should offer a liberal education which should be accepted by colleges.

79. **De Garmo, Charles.** What is the true function of the free public high school? *In* Northwestern university. National conference on secondary education. 1903. p. 60–63.

The bonds of union between colleges and high schools.

80. **Draper, A. S.** University questions concerning the common schools. *In* Illinois state teachers' association. Journal of proceedings, 1903. p. 41–51. *Also in* Educational review, 27: 109–30, February 1904. *Also in his* American education. 1909. p. 165–83.

Discusses: length of courses; university influence upon the teaching below; moral influence of universities.

81. **Harris, George.** The secondary school and the college. *In* Schoolmasters' association of New York and vicinity. Annual report, 1903–4. p. 102–10.

82. **Flexner, Abraham.** The preparatory school. Atlantic monthly, 94: 368–77, September 1904.

It has sprung up mechanically to enforce the accepted college entrance scheme, is not a part of the coherent system, and its courses are neither cultural nor disciplinary.

83. **Hyde, W. D.** The place of the college in the social system. *In* New England association of colleges and preparatory schools. Proceedings, 1904. p. 38–54. *Also in* School review, 12: 782–97, December 1904.

Compares the training given by the college with that of the secondary school and that of the university.

84. **Brown, E. E.** Secondary education. *In* Butler, N. M. Monographs on education in the United States. 1904. no. 4, p. 22–37.

Topics: a continuous system of public instruction; the schools and the colleges; accrediting system; school and college associations; Committee of ten; elective system; college entrance requirements.

85. **Coates, C. E.** The interdependence of schools and colleges. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1904. p. 56–62.

How best to define the part of each and to bring about cooperation.

(1905–1909.)

86. **Harper, W. R.** Waste in higher education. *In his* Trend in higher education. 1905. p. 78–117.

Names four points in which there is great waste in preparation for college, p. 78–88.

87. **Hill, A. R.** The articulation of high schools, colleges and universities. *In* Missouri state teachers association. Proceedings, 1905. p. 91–95.

88. **Tucker, S. M.** The relation of the Southern college to the public school. Southern educational review, 3: 834–42, March 1906.

89. **Buchner, E. F.** The relation of the high school to the college. Education, 26: 571–83, June 1906.

90. **Benton, G. W.** Since high schools are costing so much what can colleges do to assist them in meeting the demands of the public? *In* North Central association of colleges and secondary schools. Proceedings, 1906. p. 46–63.

Based on answers to a questionnaire sent to high schools.

91. **Moore, F. W.** College preparatory work in southern schools. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1906. p. 57–66.

Shows conditions by tabulation of answers to a questionnaire.

92. **Birdseye, C. F.** Our secondary schools: the former college course moved back into them—age and maturity of their students. *In his* Individual training in our colleges. 1907. p. 124–29.

93. What does the college expect of the high school? *In* Michigan schoolmasters' club. Journal, 1907. p. 1–14.

Papers by A. G. Canfield and J. L. Snyder. The high school should at least recognize preparation as a part of its duty, take it seriously, and also give a good idea of the educative process.

94. **Cook, Webster.** College influence and high school development. *In* Michigan schoolmasters' club. Journal, 1907. p. 14–22.

College control in the past has been too rigid; colleges should require merely mental maturity.

95. **Kirkland, J. H.** The high school and the university. *In* Conference for education in the South. Proceedings, 1907. p. 168–81.

A discussion of what is the proper line of demarcation between high school and college work; in practice there is much duplication.

96. **Wilson, Woodrow.** School and college. *In* Association of college and preparatory schools of the Middle states and Maryland. Proceedings, 1907. p. 73–89.

97. Preparation for college as a means of education. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1907. p. 90–105.

Papers by T. S. Baker and J. E. Allen.

98. **Allen, J. E.** For closer relations between secondary schools and colleges. West Virginia educator, 2: 5–6, May 1908.

99. **Johnson, O. A.** The correlation of high school and university. Western journal of education, 13: 384–92, July 1908.

100. **Larned, C. W.** The inefficiency of the public schools. North American review, 188: 336–46, September 1908.

Based on the results of entrance examinations at West Point.

101. **McAndrew, William.** Where the high school fails. World's work, 16: 10648–51, September 1908.

"How college influences and the striving to produce the superhuman have hurt secondary education."

102. **Flexner, Abraham.** The college and the secondary school. *In his* American college. 1908. p. 60–115.

The college not only hinders its own progress by its requirements and examinations, but vetoes modern teaching methods in secondary schools, so that the two work at cross purposes.

103. **Mell, P. H.** The college attitude toward the high school. *In* Southern educational association. Journal of proceedings and addresses, 1908. p. 279–82. *Also in* Southern educational review, 6: 17–20, April, May, June, July 1909.

104. **Graham, John.** Relation of the high school to the state and college. *In* Southern educational association. Journal of proceedings and addresses, 1908. p. 325–27.

105. **Kent, C. W.** The high school and the college. *In* North Carolina teachers' assembly. Proceedings, 1908. p. 305–6.

106. **Harding, H. P.** The college and the high school. *In* North Carolina teachers' assembly. Proceedings, 1908. p. 306–12.

107. **McCartney, T. B.** The relation of high school and college. *In* Kentucky educational association. Proceedings, 1908. p. 29–34.

108. **Coulter, J. M.** What the university expects of the secondary school. School review, 17: 73–84, February 1909.
It ought to expect good teaching and well prepared students.

109. **Munroe, J. P.** How the colleges ruin the high schools. World's work, 18: 11541–44, May 1909. *Also in his* New demands in education. 1912. p. 202–13.
Shows why the high school fails to meet community needs.

110. Legitimate scope of the small high school in relation to preparation for college. Pennsylvania school journal, 58: 349–56, February 1910.
Papers by Edwin Lee and J. B. Geissinger, read before the High school department of the Pennsylvania educational association, December 1909.

111. **Lewis, W. D.** College domination of high schools. Outlook, 93: 820–25, December 11, 1909.
Reply by J. H. Gardiner, in Outlook, 94: 626–31, March 19, 1910.

112. **Brown, J. F.** The function of the high school: relation to higher institutions. *In his* American high school. 1909. p. 54–71.
A brief summary of present conditions and questions.

113. **Buchner, E. F.** The evaluation of higher education by means of the unit system. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1909. p. 52–61. *Also in* Educational review, 39: 511–21, May 1910.
Can it be judged by such a mechanical method?

114. **Carnegie foundation for the advancement of teaching.** Educational problems and progress. *In its* Annual report, 1909. p. 130–64.
Contents: Use and limitation of a standard unit in secondary education; articulation of high school and college; use of college requirements for admission; preparatory department; weighting of college entrance requirements.

115. **Hill, A. R.** The state university's duty to the public high school and how it should be performed. *In* National association of state universities. Transactions and proceedings, 1909. p. 136–43. Discussion, p. 143–56.
Takes up their relations in the training of teachers, articulation of courses of study, admission by certificate, and joint conferences.

116. **Hollister, H. A.** Relation of the high school to colleges. *In his* High school administration. 1909. p. 237–52.
Favors the system of accrediting by inspection.

117. **McSweeney, E. F. X.** Coordination of colleges to seminaries. *In* Catholic educational association. Report of the proceedings, 1909. p. 103–15.

118. **Patterson, J. K.** The university and its relation to the public high school. *In* Kentucky educational association. Proceedings, 1909. p. 131–38.

119. Some things which the colleges and the state examinations do not require. *In* New York state teachers association. Proceedings, 1909. p. 623–50.
Papers by Benjamin Heydrick, Henrietta Rodman, and John Erskine.

120. **Stringham, Irving,** *and* **Lange, A. F.** The reorganization of school systems with incidental reference to preparation for the professional school. *In* Association of American universities. Journal of proceedings, 1909. p. 14–24. Discussion, p. 24–31.
Mainly a discussion of the principles of unification and correlation, with careful attention to ease of transition.

121. **Thompson, W. O.** The province of the state educational institutions in the administration of public education. *In* National education association. Journal of proceedings and addresses, 1909. p. 430–33. Discussion, p. 433–34.

122. **Williston, S. W.** Has the American college failed to fulfill its function? *In* National education association. Journal of proceedings and addresses, 1909. p. 526–33.
Emphasizes its narrowness and illiberality, lack of discipline, and control of high schools.

(1910-1913.)

123. **McAndrew, William.** The college influence on public high schools. Syracuse, C. W. Bardeen, 1910. 45 p. 12°. *Also in* School bulletin, 36: 89-93, January 1910.

A presentation of some of the current discontent with college domination, summarizing the opinions of 106 high school men and women selected haphazard.

124. **Cary, C. P.** New mission of high schools. Western journal of education, 15: 98-101, February 1910. *Also in* Journal of education, 71: 174-75, 255-56, February 17, March 10, 1910. Western teacher, 17: 261-62, March 1910.

Schools must have freedom in order to do their best work and "connect with life."

125. **Owen, W. B.** The way out. (Editorial.) School review, 18: 277-78, April 1910.

Constructive suggestions as to the problem of control of the secondary school.

126. **Beers, L. W.** The domination of the high school by the university. South Dakota educator, 23: 17-20, April, May 1910.

127. **Parlin, C. C.** The university and the high school. American college, 2: 386-88, August 1910.

From a paper delivered before the Northeast Wisconsin teachers' association.

128. **Hand, W. H.** The opportunities and the obligations of the college. Sewanee review, 9: 358-63, October 1910.

It should raise the standard of the schools below.

129. Secondary education. *In* U. S. Bureau of education. Report of the Commissioner, 1910. v. 1, p. 15-20.

Part of the Commissioner's introduction dealing with difficulties in the problem of adjustment of colleges and public high schools.

130. **Brown, E. E.** Recent tendencies. *In his* Making of our middle schools. 1910. p. 369-92.

Historical account of the movement since the Civil War to bridge the gap between the high schools and the colleges. Bibliographical notes, p. 413-15.

131. **Carnegie foundation for the advancement of teaching.** The relations of colleges and secondary schools. *In its* Annual report, 1910. p. 47-80.

A very comprehensive treatment of present conditions and possibilities.

132. **Cooper, R. F.** The functions of the high school as compared with those of the college. *In* Alabama educational association. Official proceedings, 1910. p. 262-68.

133. **High school teachers association of New York city.** Articulation of high school and college; the reorganization of secondary education; statement of the High school teachers association; opinions from college presidents, superintendents, and high school principals; resolutions adopted by three departments of the National education association. New York, High school teachers' association, 1910. 49, [2] p. 12°.

134. **Jaggar, Thomas A.** The duty of New England at the present time, with reference to the endowed colleges and the public schools. Education, 31: 289-301, January 1911.

Advantages which the proposed "Massachusetts college" would bring to the educational system.

135. **Bagley, W. C.** Entrance requirements and "college domination" as sources of motivation in high school work. School review, 19: 73-84, February 1911.

Entrance requirements may function as motives, but they should be subsidiary, and the aim should be primarily to realize the intrinsic values which the subject matter possesses.

136. **Holmes, W. H.** How the College entrance certificate board can help the high school. Education, 31: 567-77, May 1911.

Thinks colleges should have school inspection, a more uniform course for freshmen, and a method of recommending graduates as teachers in high schools.

137. **Meiklejohn, Alexander.** What constitutes preparation for college? the college view. Education, 31: 578-84, May 1911.

Believes the aim of the college is fundamentally intellectual and the high school graduate should come to it with this attitude.

138. **Bowers, F. T.** What constitutes preparation for college; a layman's view. Education, 32: 16–19, September 1911. *Also in* American educational review, 32: 674–76, September 1911.

Preparation for life should be accepted as preparation for college, and the college courses altered to suit.

139. **Vermont university.** College requirements and the secondary curriculum: addresses presented at the educational conference held in connection with the inauguration of G. P. Benton as President. Burlington [1911] 79 p. 8°.

Contains addresses of interest by E. C. Moore, J. E. Lough, E. M. Roscoe, and J. P. Taylor.

140. **Inglis, A. J.** The high school in its relation to the college. *In his* Rise of the high school in Massachusetts. ' 1911. p. 65–70.

141. Needed adjustment between secondary schools and colleges. *In* National education association. Journal of proceedings and addresses, 1911. p. 461–76.

Papers by R. J. Aley, G. W. A. Luckey, O. W. Caldwell, and discussion.

Caldwell's paper also (reprinted and rearranged) in School science and mathematics, 12: 126–30, February 1912.

142. **National education association.** Report of the Committee of nine on the articulation of high school and college. *In its* Proceedings and addresses, 1911. p. 559–67. *Also in* Kingsley, C. D. College entrance requirements. 1913. p. 97–105. *Also in* High school education, ed. by C. H. Johnston. 1912. p. 533–46.

Field and function of education in the high school; definition of a well-planned high school course; reasons for its adoption as the basis of college admission.

143. **LeFevre, Arthur.** The proper relation of the American high school to the American university. *In* Southern educational association. Journal of proceedings and addresses, 1911. p. 425–36. *Also in* Texas school journal, 29: 7–12, December 1911; American school board journal, 44: 20–21, 44–45, January 1912; American educational review, 33: 549–55, July 1912.

The university as adviser of the school.

144. **Fletcher, T.** The articulation of the high school with the elementary school and with the college. *In* Southern educational association. Journal of proceedings and addresses, 1911. p. 467–78.

145. **Kirkendall, F. C.** How can the college help the high school? *In* Ohio college association. Transactions, 1911. p. 56–68.

146. **Hughes, R. M.** How can the high school help the college? *In* Ohio college association. Transactions, 1911. p. 69–75.

147. What can the colleges do to encourage more thorough work in fundamental subjects in the schools? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1911. p. 12–26.

Two papers: Isaac Sharpless thinks college officials can only demand reasonable fitness of the schools if they grant the latter's demands; W. H. Maxwell says colleges should prepare their graduates better for teaching, and give more comprehensive examinations to prevent cramming.

148. **Norlin, George.** High school preparation for college. Colorado school journal, 27: 16–19, January 1912.

Should the cultural courses be sacrificed to a course which leads to efficiency in our industrial life?

149. **Ellis, Alston.** The articulation of the high school and the college. Ohio teacher, 32: 295–300, February 1912.

150. School and college. Dial, 52: 341–43, May 1, 1912.

A defense of the college in answer to those who complain of its ideals of intellectual attainment because they are too impracticable.

151. **Hodgman, T. M.** Functional changes in the college. Educational review, 44: 240–48, October 1912.

Changing conditions seem to point toward a modification of the curriculum and entrance requirements of the small college.

152. **Stratton, Clarence.** How can the university be of more help to the secondary school? English journal, 1: 482–87, October 1912

153. **Sisson, E. O.** College students' comments on their own high-school training. School review, 20: 649–64, December 1912.

154. The articulation of the high school and the college. *In* Pittsburgh university. Celebration of the 125th anniversary, 1912. p. 192–214.

Discussion of the report of the N. E. A. committee of 1911, by representatives of colleges and secondary schools.

155. **Craig, J. B.** College inspection by the high school. *In* Pittsburgh university. Celebration of the 125th anniversary, 1912. p. 272–277. Discussion, p. 277–86.

Certain points which the college can learn from the high school.

156. **National education association.** Report of the committee on the articulation of high school and college. *In its* Journal of proceedings and addresses, 1912. p. 667–73.

Followed by statements of opinion regarding the report of the previous year, with mention of some changes made by different institutions as a result.

157. **Angell, J. R.** A suggestion of a method for improving the relations of colleges and secondary schools. *In* National education association. Journal of proceedings and addresses, 1912. p. 768–72.

Exchange of visits between high school and college teachers would make them more appreciative of each other's point of view.

158. **Boynton, F. D.** College domination of the high school. *In* New York (State). Associated academic principals. Proceedings, 1912. p. 19–29.

159. **Sledd, Andrew.** The relation of the college to the secondary schools. *In* Alabama educational association. Official proceedings, 1912. p. 211–15.

The function and part of each in the educational system.

160. **Lull, Herbert Galen.** Inherited tendencies of secondary instruction in the United States. Berkeley, University of California press, 1913. [155]–281 p. 4°. (University of California publications. Education. v. 3, no. 3, April 15, 1913.)

Includes "a study of the changing relationships between colleges and secondary schools, . . the effects of the amount and quality of preparatory work required by the colleges upon secondary instruction, the effects of the Report of the Committee of ten, . . the contribution of modern psychology to the solution of the problem."

161. **Roosevelt, Theodore.** The high school and the college. Outlook, 104: 66–68, May 10, 1913.

162. **Schinz, Albert.** Difference between the work of the high school, college, and graduate school. Educational review, 46: 237–51, October 1913.

Discusses the duplication of work of the different parts of the educational system.

III. ENTRANCE REQUIREMENTS.

163. **Harrington, K. P.** Some things that our colleges may justly demand of the preparatory schools. School and college, 1: 257–66, May 1892.

164. What do the colleges want of the secondary schools: discussion. *In* New York (State). University. University convocation. Proceedings, 1895. p. 787–829. (Regents' bulletin no. 32.) *Also in its* Annual report of the Regents, 1895. v. 2, p. 787–829.

Takes up separatively English, mathematics, the sciences, Latin, Greek and modern languages.

165. **Eliot, C. W.** Requirements for admission to colleges and scientific schools. *In* Schoolmasters' association of New York and vicinity. Annual report, 1895–6. p. 78–92. Discussion, p. 93–106.

166. **Eliot, C. W.** A wider range of electives in college admission requirements. Educational review, 11: 417–28, May 1896. Discussion, p. 428–32. *Also in his* Educational reform. 1898. p. 375–91.

How to surmount the difficulties involved in the problem.

167. **National educational association.** Preliminary report of the committee on college entrance requirements. School review, 4: 341–460, 535–38, June, September 1896.

Tabular statement of entrance requirements of 67 representative institutions, followed by a full summery of the requirements in French, German, Greek, history, Latin, mathematics and science.

168. **Mendenhall, T. C.** Requirements for admission to scientific schools. *In* New England association of colleges and preparatory schools. Addresses and proceedings, 1896. p. 1–11. Discussion, p. 11–26. *Also in* School review, 4: 713–23, December 1896. Discussion, 723–39.

169. **Nightingale, A. F.** Reform of college entrance requirements. Educational review, 14: 34–44, June 1897.

Conditions and events which show the increasing interest of the colleges in the progress of the movement.

170. **Nightingale, A. F.** Report of the chairman of the joint committee on college-entrance requirements. *In* National education association. Journal of proceedings and addresses, 1897. p. 647–52. Discussion, p. 652–655.

171. **Sharpless, Isaac.** Some problems of college entrance. Journal of pedagogy, 11: 60–73, January 1898.

172. **National educational association.** Report of committee on college entrance requirements, July, 1899. Appointed . . . 1895. Chicago, 1899. 188 p. 8°. *Also in its* Journal of proceedings and addresses, 1899. p. 632–817.

Recommendations as to courses of study for secondary schools, with reports of subcommittees and of associated committees from the American philological association, Modern language association, American historical association, and American mathematical society.

173. **Keyes, C. H.** College admission requirements. Educational review, 19: 59–67, January 1900.

A discussion of the N. E. A. Report.

174. **Nightingale, A. F.** College entrance requirements. *In* Association of collegiate alumnae. Publications, ser. 3, no. 3, p. 36–47. February 1900.

Much of the same material (some verbatim) appeared in the Educational review for June, 1897.

175. College entrance requirements. *In* Association of collegiate alumnae. Publications, ser. 3, no. 4, p. 23–54. February 1901.

Papers, by M. C. Thomas, pleading against too much freedom in the secondary school curriculum, and by E. M. Perkins, discussing the N. E. A. report.

176. **Babbitt, E. H.** Some present educational problems: requirements for admission to college. Sewanee review, 9: 312–16, July 1901.

From the Southern point of view.

177. **Hill, A. R.** What determines fitness for entrance to college? *In* North Central association of colleges and secondary schools. Proceedings, 1901. p. 4–11.

Information, habits and interest are the factors of a student's intellectual power which make him fit to enter upon a college course.

178. **Broome, E. C.** A historical and critical discussion of college admission requirements. New York, Macmillan, 1903. 157 p. 8°. Columbia university. Contributions to philosophy, psychology and education, v. 11, no. 3–4.)

Part 1, Historical discussion. Part 2, Discussion of present phases, including flexibility, accrediting system, uniformity.

179. **Ramaley, Francis.** Some thoughts on college entrance requirements. Education, 24: 277–80, January 1904.

180. Effect of the present college entrance requirements upon secondary students. *In* Schoolmasters' association of New York and vicinity. Annual report, 1905–1906. p. 98–108.

Papers by R. M. Jones and D. A. Kennedy.

181. **Kirkland, J. H.** Requirements for admission to college. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1906. p. 66–82.

A study of the present practice, with suggestions for improvement.

182. **Carnegie foundation for the advancement of teaching.** The function of college requirements for admission. *In its* Annual report, 1907. p. 66–75.

Discusses the reasons for the diversity of requirements.

183. **Merrifield, Webster,** *and* **Tight, W. G.** Basing entrance requirements on a fixed number of recitation periods of a given length per year, instead of upon a fixed number of courses. *In* National association of state universities. Transactions and proceedings, 1907. p. 186–90.

184. **Butler, N. M.** General problem of college entrance or admission to college. *In* Schoolmasters' association of New York and vicinity. Annual report, 1908–9. p. 64–75.

185. **Sherarts, F. M.** High school constants and college entrance requirements. *In* North Dakota educational association. Proceedings, 1908–9. p. 81–88.

186. **Fryer, John.** Admission of Chinese students to American colleges. Washington, 1909. 221 p. 8°. (U. S. Bureau of education. Bulletin, 1909, no. 2.)

Compares the college entrance requirements of the different institutions; gives tables showing provisions for Chinese students.

187. **Brown, J. S.** The autonomy of the high school. *In* National education association. Journal of proceedings and addresses, 1909. p. 480–85. *Also in* Missouri school journal, 26: 338–44, August 1909.

Control must be from within, and not from without by some self-appointed, unlawfully constituted authority.

188. **Snyder, J. L.** Entrance requirements for land-grant colleges. *In* Association of American agricultural colleges and experiment stations. Proceedings, 1909. p. 65–68. Discussion, p. 68–71. (U. S. Experiment stations office. Bulletin 228.)

189. **Pritchett, H. S.** The use and limitations of a standard unit in estimating the work of secondary schools. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1909. p. 62–65. Discussion, p. 65–80)

190. **Dennis, C. E.,** *jr.* Report of committee on college entrance requirements. Education, 30: 649–60, June 1910.

191. **Hill, A. R.** Do present college-entrance requirements sufficiently recognize different tastes and tendencies of pupils? *In* National education association. Journal of proceedings and addresses, 1910. p. 208–11. Discussion, p. 211–14.

192. **Aley, R. J.** Entrance requirements for state universities. *In* National association of state universities. Transactions and proceedings, 1911. p. 224–39.

University should accept the work of the high school and become in reality the crown of the public school system.

193. **Benton, G. W.** Relations of colleges and secondary schools. *In* North Central association of colleges and secondary schools. Proceedings, 1911. p. 16–22.

Entrance conditions should become more democratic and suited to different types of mind.

194. **Society for the promotion of engineering education.** Report on entrance requirements and definition of subjects presented by committee on entrance requirements. *In its* Proceedings, 1911. p. 330–66. Discussion, p. 367–75.

Greater part of definitions are for language and science.

195. **Taylor, J. P.** The doomed pupil. *In* Vermont university. College requirements and the secondary curriculum. [1911.] p. 36–42. *Also in* Educational review, 43: 499–507, May 1912.

A plea for the assimilation of the cultural and the practical in the high school courses.

196. **Warringer, E. C.** University entrance requirements from the viewpoint of the public. *In* Michigan schoolmasters' club. Journal, 1911. p. 23–33.

197. Entrance requirements. *In* U. S. Bureau of education. Report of the Commissioner, 1911. v. 1, p. 44–50.

Outlines the existing situation.

198. **Monroe, Paul,** *ed.* College requirements for admission, or college entrance requirements. *In his* Cyclopedia of education. 1911–13. v. 2, p. 97–107.

Historical development; statement of the problem: Latin, Greek, English, mathematics, modern languages, history, science, &c. References, p. 107.

199. **Fleming, W. L.** College entrance requirements. Louisiana state university quarterly, 7: 23–42, January 1912.

Bibliography, p. 23. Admission requirements of Southern colleges and universities, 1911-12, p. 37–42.

200. **Judd, C. H.** Reasons for modifying entrance requirements. Education, 32: 266–77, January 1912.

In discussing the new University of Chicago plan, author emphasizes need of more scientific methods of determining relations of high schools and colleges.

201. **Huddleston, M. P.** Modification of college entrance requirements. *In* Association of collegiate alumnae. Journal, 5: 282-90, May 1912.

202. **Babcock, K. C.** College standards as affected by diffusion of entrance credits. *In* Association of colleges and secondary schools of the Southern states. Proceedings, 1912. p. 47-55.

203. Entrance requirements and the college degree. Education, 33: 263-75, January 1913.

Papers by C. H. Forbes and H. T. Fowler, emphasizing the need of continuity in secondary and college work.

204. Greater flexibility in college entrance requirements. Education, 33: 527-69, May 1913.

Addresses by W. H. Holmes: The needs of the high schools; H. B. Huntington: The attitude of the colleges; H. N. Davis: The new Harvard plan.

205. **Corwin, R. N.** The western high school and the eastern university. Yale alumni weekly, 22: 884-88, May 16, 1913.

A complete statement of the college entrance requirement situation in this country, with particular reference to the high schools and Yale university.

206. **MacLean, G. E.** Present standards of liberal arts colleges: entrance requirements. *In his* Present standards of higher education in the United States. 1913. p. 24-46. (U. S. Bureau of education. Bulletin, 1913, no. 4.)

Main topics: uniformity; specimen requirements of representative universities and colleges; methods of admission; modifications of the examining and certificate systems.

207. **Kingsley, C. D.** College entrance requirements. Washington, Government printing office, 1913. 110 p. 8°. (U. S. Bureau of education. Bulletin, 1913, no. 7.)

Preliminary discussion on the amount and flexibility of entrance requirements, followed by tables analyzing the requirements of 204 colleges of liberal arts, 85 colleges of engineering, and 31 colleges of agriculture.

208. **McVey, F. L.** The matter of college entrance requirements. Popular science monthly, 83: 286-93, September 1913.

Gives table showing admission units required in liberal arts colleges, etc.

209. **Mulford, R. J.** Dissatisfaction with the present college entrance requirements. Outlook, 105: 49-50, September 6, 1913.

210. College entrance requirements as set forth by the several institutions representing the Ohio college association. Wooster, O., University of Wooster, 1913. 33 p. 8°.

TABLES.

211. **Nightingale, A. F.,** *comp.* Hand-book of requirements for admission to the colleges of the United States, with miscellaneous addenda, for the use of high schools, academies, and other college-preparatory institutions. New York, Appleton, 1879. 61, [1] p. tables. 4°.

212. Comparative view of admission requirements. *In* U. S. Bureau of education. Report of the Commissioner, 1886-87. p. 630-41.

Statistical tables for 21 universities and colleges; 12 agricultural and mechanical colleges; 6 institutions for the superior instruction of women.

213. Requirements for admission to freshman class in colleges, universities, and schools of technology. *In* U. S. Bureau of education. Report of the Commissioner, 1896-97. v. 1, p. 457-613.

Tabulation of admission requirements to 475 colleges and scientific schools, with preliminary remarks.

214. Entrance requirements for engineering colleges. *In* U. S. Bureau of education. Report of the Commissioner, 1896-97. v. 1, p. 891-98.

Classified statistics based on a study of 89 institutions, with general conclusions and recommendations.

215. **Purinton, D. B.** Entrance requirements of American colleges. West Virginia school journal, 36: 16-17, June 1907.

List of colleges; units required.

216. **Bowman, J. G.** The basis of college education. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1908. p. 72–79. Discussion, p. 80–85.

Statistics of points required by various colleges, and entrance requirements in general.

217. **Carnegie foundation for the advancement of teaching.** Admission of conditioned and of special students. *In its* Annual report, 1908. p. 107–33.

With tables showing regulations for the admission of such students.

218. **Carnegie foundation for the advancement of teaching.** Progress toward a better adjustment between the college and the secondary school. *In its* Annual report, 1911. p. 60–69.

Shows the progress of the last ten years; with a comparative table of entrance requirements of 172 representative institutions.

219. **Davis, C. O.** Entrance requirements in twenty-five colleges and universities. School review, 20: 484–86, September 1912.

Comparative table with summary of present conditions in fifteen state and ten non-state institutions.

UNIFORMITY.

220. **Bancroft, C. F. P.** Is any greater degree of uniformity in requisitions for admission to college practicable? *In* New England association of colleges and preparatory schools. Addresses and proceedings, 1885–87. p. 9–16. Discussion, p. 16–18.

221. **Farrand, Wilson.** The reform of college entrance requirements. *In* Schoolmasters' association of New York and vicinity. Annual report, 1895–96. p. 19–32. *Also in* Educational review, 10: 430–44, December 1895.

Reviews the status of requirements, the chief objections to existing conditions, and some plans proposed as remedy. Advocates uniformity.

222. Conclusions as to uniform college entrance requirements, reached by the conferences held at Columbia college, February, 1896. Educational review, 11: 494–501, May 1896.

Recommendations of each of six conferences in Latin, Greek, mathematics, French, German, and history.

223. **Jones, R. W.** Our proposed new requirements for admission to college. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1900. p. 5–14. *Also in* School review, 9: 105–14, February 1901.

224. **Forbes, S. A.** The desirability of so federating the North Central colleges and universities as to secure essentially uniform or at least equivalent entrance requirements. *In* North Central association of colleges and secondary schools. Proceedings, 1901. p. 11–21.

225. **Eliot, C. W.** What has been gained in uniformity of college admission requirements in the past twenty years? *In* New England association of colleges and preparatory schools. Addresses and proceedings, 1904. p. 6–17. Discussion, p. 17–38. *Also in* School review, 12: 757–69, December 1904. Discussion, p. 769–81.

226. **Henneman, J. B.** Standards of admission to southern colleges. *In* Conference for education in the South. Proceedings, 1904. p. 90–98.

Outlines the history of movements for uniform entrance requirements.

227. **Brown, E. F.** The unification of college entrance requirements. Educational bi-monthly, 2: 43–50, October 1907.

An attack on pedantic English teaching.

228. **Kirtland, J. C.** Defects of college entrance requirements. Nation, 85: 372–73, October 24, 1907.

Letter criticizing the colleges for lack of uniformity and improper placing of emphasis.

229. **Foster, W. T.** The movement for uniformity in college requirements. Nation, 87: 571–72, December 10, 1908.

230. **Carnegie foundation for the advancement of teaching.** Progress toward unity in college requirements for admission. *In its* Annual report, 1908. p. 92–106.

Survey showing origin and progress of the movement.

STANDARDS.

231. **Collar, W. C.** The action of the colleges upon the schools. Educational review, 2: 422–41, December 1891.

Tries to show that lack of uniform requirements does not raise the standard of secondary schools.

232. **Brooks, Edward.** Standards of admission to college. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1896. p. 71–79. Discussion by C. W. Eliot and others, p. 79–105.

233. **Harris, W. T.** Colleges should lower their standards of admission. Education, 17: 579–85, June 1897.

234. **Moore, F. W.** The equalization of the requirements for admission into the different courses leading to the first collegiate degree. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1901. p. 36–43. *Also in* School review, 10: 217–23, March 1902.

Requirements should be more rigid and accept candidates only on the same terms, not take in many for the sake of numbers.

235. On what conditions should the Southern association provide for the admission to college of "special" students? *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1902. p. 25–38.

Papers by G. H. Denny and C. B. Wallace.

236. Is a further liberalizing of college entrance standards desirable in the West? *In* Illinois state teachers' association. Journal of proceedings, 1906. p. 91–95.

(1) From the high school point of view, by F. D. Thomson. (2) From a college standpoint, by T. A. Clark.

237. **Stewart, J. S.** The high school population of the South and a plan for the correlation of the high schools and the higher institutions. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1906. p. 13–22.

Recommends the adoption of a unit system with a definite number of units.

238. **Bowman, J. G.** College entrance requirements in theory and practice. Independent, 66: 133–36, January 21, 1909.

Admission of conditioned students shows that the standards of most colleges are really not so high as the formal statements of requirements represent.

239. **Foster, W. T.** Our democratic American colleges. Nation, 88: 324–26, April 1, 1909.

Admission of candidates who have not met all the requirements is one cause of the alleged inefficiency of the colleges.

240. **Foster, W. T.** The American college on trial. School review, 17: 330–43, May 1909.

The real reason for the inefficiency of colleges is that they admit unprepared students merely to get greater numbers.

241. **Baker, J. H.** What influence should the Carnegie foundation have on entrance requirements for state universities? *In* National association of state universities. Transactions and proceedings, 1909. p. 54–58.

It should help to standardize them and at the same time make them more flexible and adaptable.

242. **Snyder, H. N.** A little experiment in enforcing a fourteen-unit entrance standard. Sewanee review, 9: 136–43, April 1910.

"In a typical Southern college."

243. **Gaines, F. H.** Freshman requirements in Southern colleges. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1911. p. 36–47.

A study of the results of the work of the Association in trying to raise standards.

244. **Walmsley, J. E.** Wise, honest and just administration of college entrance requirements. *In* Southern educational association. Journal of proceedings and addresses, 1911. p. 415–25.

Desire for numbers makes colleges admit immature and inadequately prepared students.

QUANTITY.

245. **Rhodes, O. B.** Are colleges requiring too much for admission? *In* New York (State). University. University convocation. Proceedings, 1890. p. 179–85. Discussion, p. 185–202. *Also in its* Annual report of the regents, 1890. v. 1, p. 449–72.

Paper expresses the belief that pupils can not complete the present requirements at an early enough age.

246. High college entrance requirements. Are the abnormally high requirements for admission maintained by a few colleges an injury to higher education? Discussion. *In* New York (State). University. University convocation. Proceedings, 1892. p. 47–56. (Regents' bulletin no. 9.) *Also in its* Annual report of the regents, 1892. p. 49–59.

247. **Mackenzie, J. C.** Are the present entrance requirements for admission to college too great in quantity? *In* Schoolmasters' association of New York and vicinity. Annual report, 1895–96, p. 107–14. Discussion, p. 114–17. *Also in* Educational review, 12: 252–60, October 1896.

248. **Farrand, Wilson.** Are college entrance requirements too great in quantity? *In* Schoolmasters' association of New York and vicinity. Annual report, 1905–6. p. 19–33. Discussion, p. 33–40. *Also in* Educational review, 31: 1–17, January 1906.

Comparison of the requirements of several colleges shows that they result in an unusually high pressure in the schools, and should be reduced.

249. **Robinson, M. C.** The pupil and the requirement. School review, 14: 587–93, October 1906.

Colleges do not consider sufficiently the immaturity and lack of ability of the pupils.

250. **Wight, J. G.** Should college entrance requirements be reduced in quantity? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1906. p. 45–56. Discussion, p. 56–78.

251. **Farrand, Wilson.** Are college entrance requirements excessive? *In* New England association of colleges and preparatory schools. Proceedings, 1907. p. 67–80. Discussion, p. 80–104. *Also in* School review, 16: 12–22, January 1908. Discussion, p. 22–41.

Grounds of complaint and recommendations proposed as remedies.

252. **Farrand, Wilson.** The quantity of college entrance requirements. (Editorial.) School review, 16: 341–43, May 1908.

253. **Orr, William.** Are college entrance requirements excessive? point of view of the preparatory school. Education, 29: 551–60, May 1909.

254. **Meiklejohn, Alexander.** Are college entrance requirements excessive? From the college point of view. Education, 29: 561–66, May 1909.

255. **Farrand, Wilson.** Are college entrance requirements excessive? the reasonable solution. Education, 29: 567–75, May 1909.

256. **Bishop, D. H.** Should not the university and colleges of Mississippi adjust their entrance requirements to what the high schools can properly do? *In* Mississippi teachers' association. Proceedings, 1909. p. 42–48. *Also in* Mississippi school journal, 13: 1–7, June 1909.

257. **Gooch, W. D.** Should not the university and colleges of Mississippi adjust their requirements to what the high schools of the state can properly do? *In* Mississippi teachers' association. Proceedings, 1909. p. 65–67.

258. **Owen, W. B.** What the colleges can do. (Editorial.) School review, 18: 353–56, May 1910.

Relief measures to reduce the pressure of the colleges on the secondary schools.

259. **Miller, E. L.** College entrance requirements from the viewpoint of the high school. *In* Michigan schoolmasters' club. Journal, 1911. p. 13–22. *Also in* Western journal of education, 4: 193–206, May 1911.

Emphasizes the need of cooperation to reduce the requirements of the university.

IV. METHODS OF ADMISSION.

260. **Waterhouse, F. A.** Methods of determining the qualifications of candidates for admission to college. *In* New England association of colleges and preparatory schools. Proceedings, 1892. p. 3–18. Discussion, p. 25–34. *Also in* School and college, 1: 519–34, November 1892.

261. **Hart, J. M.** Regents' diplomas and school certificates in English. School review, 1: 24–48, January 1893.

Sums up the results of questions asked of freshmen at Cornell, showing the 'certified' students much inferior to the 'examined' students.

262. **Salmon, L. M.** Different methods of admission to college. Educational review, 6: 223–41, October 1893.

Advantages and disadvantages of admission by examination, certification, and accrediting.

263. **Hanus, P. H.** University inspection of secondary schools and the Schools examination board of Harvard university. School review, 2: 257–67, May 1894.

Describes the work and methods of the Board.

264. Systems of admission to universities and colleges. School review, 4: 301–17, May 1896. Discussion, p. 318–32.

The diploma system; by B. A. Hinsdale. The Chicago plan; by H. P. Judson. The examination system; by C. H. Moore.

265. **Ramsay, C. C.** Report on admission to college on certificate and by examination. *In* New England association of colleges and preparatory schools. Proceedings, 1900. p. 44–55. Discussion, p. 55–80. *Also in* School review, 8: 593–604, December 1900. Discussion, p. 605–11.

Recommendations based on answers to a questionnaire.

266. **MacDonald, William.** The federation of educational institutions. *In* New England association of colleges and preparatory schools. Proceedings, 1900. p. 80–94. Discussion, p. 94–105. *Also in* School review, 8: 611–25, December 1900.

"For securing uniformity in entrance requirements. Discusses examination versus certificate plan."

267. **Sadler, M. E.** Inspection and examination of secondary schools. Educational review, 21: 497–515, May 1901.

From the English point of view, favoring a national system.

268. **Dexter, E. G.** Should entrance to college be through the examination of the school or of the pupil? *In* National education association. Journal of proceedings and addresses, 1902. p. 494–500.

269. **Lowell, D. O. S.** A new method of admission to college. Educational review, 24: 338–45, November 1902.

Admit anyone without examinations and require a deposit.

270. **Seely, C. D.** Admission to college by examination. *In* New York (State). Associated academic principals. Proceedings, 1903. p. 322–38. Discussion, p. 338–55. (New York (State). University. High school department. Bulletin no. 24.)

Work of the College entrance examination board shows the superiority of this method over admission by certificate. Discussion pro and con.

271. **Mensel, E. H.** The affiliated school in theory and practice. Its influence on examinations in school and college. School review, 12: 349–60, May 1904.

A comparison of the Eastern and Western systems of admission.

272. **MacLean, G. E.** Which is better: the western plan of admitting students to colleges and universities by certificates from duly inspected secondary schools, or the eastern method of admitting only by examinations conducted by representative boards or otherwise? *In* National education association. Journal of proceedings and addresses, 1905. p. 501–10. Discussion, p. 510–2. *Also in* Science, n. s. 22: 167–75, August 11, 1905.

Statement of facts and arguments showing the line of evolution of the different systems.

273. **Lowell, D. O. S.** Are the present methods of admission to college satisfactory or fair? Journal of pedagogy, 18: 25–34, September 1905.

274. **MacLean, G. E.** Can there be a co-ordination of the examining, certificate, and accrediting (including school inspection) systems for admission to college looking toward a common or national administration in the interests of students, colleges, and the preservation of standards? *In* National association of state universities. Transactions and proceedings, 1905-8. p. 65–75. *In part in* Science, n. s., 23: 645–50, April 27, 1906.

275. **MacLean, G. E.** An American federation of learning. *In* North Central association of colleges and secondary schools. Proceedings, 1906. p. 3–25.

    To establish a common national administration to coordinate the examining, certificate and accrediting systems.

276. **Young, W. H.** The standardization of the New England high schools. School review, 15: 275–83, April 1907.

    Plea for state inspection.

277. **Johnson, E. F.** A proposed plan of college entrance examinations. Nation, 88: 111, February 4, 1909.

    Suggests a combination of the certificate and examination methods.

278. **Churchman, P. H.** Certificates or examinations for college entrance. Nation, 88: 194, February 25, 1909.

279. **Butler, N. M.** A new method of admission to college. Educational review, 38: 160–72, September 1909.

    Outlines a plan for introducing the human element by means of personal interview.

280. The state superintendent *vs.* the state university; a far-reaching educational measure before the state legislature. Wisconsin journal of education, 41: 234–35, September 1909.

    Bill providing for the admission of high school graduates to the university.

281. **Wylie, L. J.** The examining board and its functions. *In* Michigan schoolmasters' club. Journal, 1909. p. 8–19.

282. **O'Shea, M. V.** The dual system must go. Advantages of an inspection board. (Editorial.) Wisconsin journal of education, 42: 1–2, January 1910.

283. **Brownson, C. L.** The relations between colleges and secondary schools: tendencies and possibilities. School review, 18: 548–59, October 1910.

    Improved conditions in secondary schools have made certification possible; why not do away with inspection?

284. **Bowman, J. G.** College examination and certification boards. *In* Monroe, Paul. Cyclopedia of education. 1911-13. v. 2, p. 87–90.

    Historical and descriptive account.

285. **Angell, J. R.** The combination of certificate and examination systems. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1911. p. 67–81. *Also in* School review, 20: 145–60, March 1912.

    Writer believes those arrangements best which are clearly most native to the conditions they are called upon to meet, and says the day has passed when any college can set itself up as a standard to which all others must conform.

286. **Sharpe, J. C.** The combination of certificate and examination systems. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1911. p. 82–88.

    Argues against the introduction of a new system which will result in renewed confusion.

287. **Kingsley, C. D.** Plan for college admission proposed by the Secondary department of the National education association. Education, 32: 278–83, January 1912.

288. **Smith, F. O.** A rational basis for determining fitness for college entrance. Pedagogical seminary, 19: 137–53, June 1912. *Also in* University of Iowa. Studies in education, 1912. v. 1, no. 3, p. 137–53.

    Comparative study, with tables showing high school and university marks of 120 liberal arts students in the State university.

289. **Mearns, W. H.** The high school and the standard. Independent, 73: 480–85, August 29, 1912.

EXAMINATIONS.

290. **Merrill, Moses.** The effect on preparatory schools of optional examinations for admission to college. Academy, 1: 121–32, May 1886.

291. **Salmon, L. M.** Unity of standard for college entrance examinations. Academy, 3: 222–31, May 1888.

292. **Kennedy, D. A.** Preliminary examinations—their advantages and disadvantages. Academy, 5: 179–91, May 1890.

293. **Tetlow, John.** Sight translation from the classics as a test of proficiency in English composition. Educational review, 14: 75–84, June 1896.

294. **Hall, E. H.** The rating of studies in college admission examinations. Educational review, 13: 417–28, May 1897. Discussion, p. 445–55, 465–68.

A statistical study made to determine the relative values of the different studies.

295. **Payne, H. E.** Curiosities of college entrance examinations. Outlook, 58: 966–68, April 16, 1898.

296. **Butler, N. M.** Uniform college entrance requirements with a common board of examiners. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1899. p. 43–49, 137–40. Discussion, p. 49–89. (New York (State). University. Regents' bulletin no. 50.) *Also in* Educational review, 19: 68–74, January 1900.

Presentation of resolutions resulting in the formation of the College entrance examination board.

297. **Bowdoin college.** Report of the conference . . . with the principals and assistants of the secondary schools of Maine, concerning entrance examinations. Brunswick, 1900. 20 p. 8°.

298. **Butler, N. M.** Report on the organization and plans of the joint college entrance board for the Middle states and Maryland. *In* New York (State). University. University convocation. Proceedings, 1900. p. 286–92. Discussion, p. 292–306. (Regents' bulletin no. 51.) *Also in its* Annual report of the Regents, 1900. p. 286–306.

299. **Hunter, Thomas.** High school defects from the college standpoint. *In* New York (State). University. University convocation. Proceedings, 1900, p. 307–13. Discussion, p. 313–18. (Regents' bulletin no. 51.) *Also in its* Annual report of the Regents, 1900. p. 307–18.

Lack of uniformity in course of study; imperfect preparation for high school; value of examination to test fitness.

300. **College entrance examination board of the Middle states and Maryland.** Plan of organization and a statement of subjects in which examinations are proposed; adopted May 12, 1900. n. p. 1900. 38 p. 8°.

Outline of plan of organization in Educational review, 20: 102–6, June 1900.

301. **Nichols, E. H.** The influence of examinations. Educational review, 19: 443–54, May 1900.

302. **Hadley, A. T.** Conflicting views regarding entrance examinations. *In* New England association of colleges and preparatory schools. Proceedings, 1900. p. 31–39. Discussion, p. 39–41. *Also in* School review, 8: 583–92, December 1900.

Examinations should be made a test of power rather than knowledge.

303. **Hadley, A. T.** The use and control of examinations. *In* National education association. Journal of proceedings and addresses, 1901. p. 240–50. *Also in* Educational review, 21: 286–300, March 1901. *Also in his* Education of the American citizen. 1901. p. 191–209.

304. **New England association of colleges and preparatory schools.** Report of the committee on admission examinations by a joint examining board presented to the New England association . . . May 25, 1901. Cambridge, n. d. 28 p. 8°.

Discussion of the report in its Proceedings, 1901. p. 3–51; in abbreviated form in School review, 9: 613–35, December 1901.

305. **Batty, E. J.** The public high school as a preparation for college. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1901. p. 28–36.
Plea for uniform entrance examinations.

306. **Russell, J. E.** Educational value of examinations for admission to college. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1902. p. 8–20. (New York (State). University. Regents' bulletin no. 60.) *Also in* School review, 11: 42–54, January 1903.
Compares conditions in the United States with those in England and Germany.

307. **Brownell, J. L.** Effect of college entrance examinations on the secondary schools. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1902. p. 30–39. (New York (State). University. Regents' bulletin no. 60.) *Also in* New York (State). University. Annual report of the Regents, 1902. p. 30–39.
The injurious effects of examinations are not inherent in the system, but are due to an irrational preparation.

308. **Flexner, Abraham.** College entrance examinations. Popular science monthly, 63: 53–60, May 1903.
"The system that relies upon them solely is fundamentally unsound."

309. **Goodwin, E. J.** A comparison of college entrance examinations. Educational review, 26: 440–56, December 1903.
Discussed by J. S. French in the March, 1904 number, v. 27, p. 305–7.

310. **Farrand, Wilson.** Five years of the College entrance examination board. Educational review, 30: 217–30, October 1905.
Review of the organization and work.

311. **Thorndike, E. L.** The future of the College entrance examination board. Educational review, 31: 470–83, May 1906.
Shows by figures and tables the relation between standing of students in entrance examinations and in the college course.

312. **Thorndike, E. L.** An empirical study of college entrance examinations. Science, n. s., 23: 839–45, June 1, 1906.
Figures showing the relation of standing in entrance examinations and in college work, based on marks of students at Columbia university. Supported by J. Y. Bergen in Science, n. s., 23: 981–82.

313. **Haskell, M. E.** Standard examinations for noncollege pupils. School review, 14: 754–57, December 1906.
Appreciates the breadth of the College board examinations and their stimulus.

314. **Fiske, T. S.** The college entrance examination board: an analysis of the examinations of 1911. Educational review, 43: 155–67, February 1912.
Comparative statistics grouping, by subjects, the candidates from private and public schools entering those colleges which certify and those admitting on examination.

315. **Goodwin, E. J.** Comprehensive examinations for high-school graduation and for admission to college. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1912. p. 19–27. Discussion, p. 28–54.

CERTIFICATION.

316. **Keep, R. P.** Under what conditions might admission to college by certificate be permitted? *In* New England association of colleges and preparatory schools. Proceedings, 1885–87. p. 25–32. *Also in* Academy, 1: 281–89, November 1886.

317. Admission to college by certificate: discussion. *In* New York (State). University. University convocation. Proceedings, 1890. p. 202–12. *Also in its* Annual report of the Regents, 1890. v. 1, p. 472–82.

318. Admission to college by certificate. Educational review, 5: 187–91, 291–95, 384–91; 6: 69–73, February, March, April, June 1893.
Opinions from eight representative institutions.

319. Admission to college on certificate. *In* Schoolmasters' association of New York and vicinity. Annual report, 1894–95. p. 19–29, 74–84.
Papers by H. H. Gadsby (pro), E. W. Given (pro), F. G. Ireland (con).

320. Admission to college by certificate. *In* U. S. Bureau of education. Report of the Commissioner, 1894–95. v. 2. p. 1171–88.

Made up mainly of statements from the annual catalogs of universities and colleges, concerning the conditions under which schools are accredited or approved and students admitted.

321. **Fullerton, G. S.** The certificate system. *In* Schoolmasters' association of New York and vicinity. Annual report, 1895–96. p. 33–36.

Argues against the system.

322. **Davis, B. C.** The certificate system for college entrance. *In* New York (State). Associated academic principals. Proceedings, 1897. p. 157–64. (New York (State). University. Regents' bulletin no. 44.)

The system would be ideal if the colleges would cooperate.

323. Admission to college on certificate. *In* Association of colleges and preparatory schools of the Southern states. Proceedings, 1899. p. 82–89.

Papers by T. W. Jordan and C. B. Wallace, showing both the advantages and disadvantages of the system as seen by experience.

324. **Penniman, J. H.** The certificate method of admission to colleges and universities. *In* Association of American universities. Journal of proceedings, 1902. p. 17–25. Discussion, p. 25–30.

Statement of the problem of satisfying entrance requirements, and how it has been worked out.

325. Admission to college on certificate of secondary schools. *In* U. S. Bureau of education. Report of the Commissioner, 1902. v. 1. p. 527–33.

Topics: New England college entrance certificate board; accrediting systems of different state universities; list of institutions admitting students on certificate.

326. College admission on school certificate; by J. M. H. Nation, 77: 207, September 10, 1903.

Favorable results of this practice at Cornell shown by statistics.

327. **Thomas, Isaac.** The New England entrance certificate board from the standpoint of the schools. School review, 12: 696–705, November 1904.

Why the Board has failed to accomplish its purpose and how conditions may be improved.

328. **Foster, W. T.** Should the high-school diploma admit to college? Education, 26: 203–8, December 1905.

329. **Davis, N. F.** Is the present mode of granting certificate rights to preparatory schools satisfactory? *In* New England association of colleges and preparatory schools. Proceedings, 1906. p. 71–79. Discussion, p. 79–92. *Also in* School review, 15: 145–52, February 1907.

Advantages and disadvantages of the work of the Board.

330. **Young, W. H.** The high schools of New England, as judged by the standard of the College certificate board. School review, 15: 134–44, February 1907.

Existing conditions do not secure articulation between the high schools and the colleges.

331. **Rhees, Rush.** Admission to college by certificate. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1907. p. 28–39.

332. **Manny, F. A.** The background of the certificate system. *In* Michigan schoolmasters' club. Journal, 1909. p. 3–8. *Also in* Education, 30: 199–206, December 1909.

333. **Association of colleges and preparatory schools of the Southern states.** The administration of the certificating system of admission into college. *In its* Proceedings, 1910. p. 66–103.

Contains: syllabus for discussion; bibliography; excerpts from letters on advantages and disadvantages of system; blanks used by different colleges; standards of admission, etc.

334. **Barnwell, C. H.** Admission by certificate. *In* Alabama educational association. Official proceedings, 1910. p. 258–62.

Provisions which should find a place in any strict and carefully guarded system of certification.

335. **International commission on the teaching of mathematics.** Entrance to college by certification. *In its* Examinations in mathematics other than those set by the teacher. 1911. p. 50–60. (U. S. Bureau of education. Bulletin, 1911, no. 8.)

History and results of the system, without special reference to mathematics.

336. **Nicolson, F. W.** The certificate system in New England. Educational review, 42: 486–503, December 1911.
History of its origin and progress in replacing examinations.

337. **Nicolson, F. W.** New methods of admission to college: recent changes in the rules of the New England college entrance certificate board. Education, 32: 261–65, January 1912.

338. **Henderson, J. L.** The task of the Southern association in perfecting a system of certification: lessons from history and experience. *In* Association of colleges and secondary schools of the Southern states. Proceedings, 1912. p. 56–62.

339. **Brooks, E. C.** Administering the certificate system. *In* Association of colleges and secondary schools of the Southern states. Proceedings, 1912. p. 86–92.

340. **Barnwell, C. H.** Manner of administering the certificating system from the standpoint of the college. *In* Association of colleges and secondary schools of the Southern states. Proceedings, 1912. p. 93–97.

341. **Henderson, J. L.** Admission to college by certificate. New York, Columbia university, Teachers college, 1912. 171 p. 8°. (Teachers college. Contributions, no. 50.)
Discusses: Educational conditions in the United States about 1870; Origin and evolution of the system by decades; Present day conditions of admission by certificate: a study of ten types. Evaluations and conclusions. Bibliography.

342. Admission to college by certificate. Journal of education, 77: 91–92, January 23, 1913.
Review and summary of J. L. Henderson's Admission to college by certificate, 1912.

343. **Elliff, J. D.** The use and abuse of the certificating system. *In* North Central association of colleges and secondary schools. Proceedings, 1913. p. 47–55.

ACCREDITING.

344. **Moss, C. M.** Some difficulties of the plan of "accrediting" high schools. Public school journal, 15: 477–79, May 1896.
One of the chief problems is where to draw the line between medium, good, and poor schools.

345. **California university.** Accrediting of secondary schools. California university chronicle, 2: 54–64, February 1899.
Circular drawn up by the Schools committee concerning the ideas underlying the accrediting system, and the lines which the recommendations of the committee follow.

346. **Fulton, R. B.** Growth of confidence between high schools and colleges. *In* National education association. Journal of proceedings and addresses, 1899, p. 147–54.
"Chiefly a discussion of the system of accredited high schools."

347. **Goebel, Julius.** The failure of the accrediting system. *In* California teachers' association. Proceedings, 1900. p. 122–28.

348. **Brooks, S. D.** The work of a high school visitor. School review, 9: 26–33, January 1901.

349. **Richardson, L. J.** The University of California and the accrediting of secondary schools. School review, 10: 615–19, October 1902.
Aims, methods and results of the policy.

350. **Whitney, A. S.** Methods in use of accrediting schools. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1902. p. 20–30. (New York (State). University. Regents' bulletin no. 60.) *Also in* U. S. Bureau of education. Report of the Commissioner, 1902. v. 1, p. 534–39. *Also in* School review, 11: 138–48, February 1903.

351. What is the effect of the system of accrediting schools by the universities upon the high school and its development? *In* Northwestern university. National conference on secondary education. 1903. p. 91–110.
Papers by E. G. Dexter, J. F. Brown, and H. A. Hollister. Brown's paper also in School review, 12: 299–307, April 1904.

352. **Carman, G. N.** Shall we accredit colleges? In North Central association of colleges and secondary schools. Proceedings, 1906. p. 81–96.
College credit should be given for work done in high schools in advance of college entrance requirements.

353. **Coffeen, E. L.** The inspection and accrediting of colleges and universities. *In* North Central association of colleges and secondary schools. Proceedings, 1906. p. 97–107.

354. **Ensign, F. C.** Should high schools in towns of 1,000 population or less try to reach the fully accredited list? *In* Iowa state teachers' association. Proceedings, 1907. p. 97–101.

355. **Sampson, H. C.** Inspection and accrediting of high schools. *In* Washington educational association. Proceedings, 1907. p. 51–53.

356. **Sisson, E. O.** The accrediting of high schools. *In* Washington educational association. Proceedings, 1907. p. 53–55.

357. **Hollister, H. A.** Some results from accrediting of high schools by state universities. Education, 29: 133–39, November 1908.

358. **Cary, C. P.** Proposed changes in the accrediting of high schools. *In* National education association. Journal of proceedings and addresses, 1909. p. 207–12. *Also in* School review, 17: 223–29, April 1909.

Discussion of the disadvantages of the various methods.

359. **Bolton, F. E.** What is meant by college domination? (Editorial.) School review, 17: 503–5, September 1909.

Present methods of inspection and accrediting give high schools much more initiative than formerly.

360. **Schumacher, Matthew.** The affiliation and accrediting of Catholic high schools and academies to colleges. *In* Catholic educational association. Proceedings, 1909. p. 132–40.

361. **Dabney, C. W.** Report of the committee on cooperation in work. *In* Ohio college association. Transactions, 1909. p. 27–32.

Uniform blank of certification adopted by the Association, p. 30-31. Requirements for admission, . 32.

362. **Hollister, H. A.** Character and scope of the work of an accredited high school. *In* Illinois state teachers' association. Journal of proceedings, 1909. p. 225–29.

363. **Judd, C. H.** The accrediting system. *In* North Central association of colleges and secondary schools. Proceedings, 1910. p. 162–73. Discussion, p. 173–87. *Also in* School review, 18: 460–70, September 1910, under title, On the comparison of grading systems in high schools and colleges. *Abstract in* School century, 5: 401–2, May 1910.

364, **Ensign, F. C.** The accredited high school. Midland schools, 25: 36–37, 75–77, October, November 1910.

365. **Walker, N. W.** Accredited schools. North Carolina high school bulletin, 2: 3–17, January 1911. tables.

366. **Herrick, C. A.** Supervision of high schools. *In his* Reclaiming a commonwealth. [1911.] p. 140–63.

Takes up inspection by colleges and by the state.

367. **Dunn, A. H.** High school inspection. Colorado school journal, 27: 16–20, May 1912.

Report presented at the High school and college conference, Boulder, March 29-30, 1912.

368. **McKeag, A. J.** High school inspection by the college. *In* Pittsburgh university. Celebration of the 125th anniversary, 1912. p. 251–60. Discussion, p. 260–72.

Paper describes methods used in Indiana, Michigan, the North Central association, and California.

369. **Maphis, C. G.** School equipment and standards of work a condition of accrediting. *In* Association of colleges and secondary schools of the Southern states. Proceedings, 1912. p. 63–73.

370. **Walker, J. C.** Methods of testing the work of schools. *In* Association of colleges and secondary schools of the Southern states. Proceedings, 1912. p. 74–78.

371. **Babcock, K. C.** Accredited secondary schools in the United States. Washington, 1913. 65 p. 8°. (U. S. Bureau of education. Bulletin, 1913, no. 29.)

Lists of schools accredited by the State universities and associations.

V. TEACHING.

372. **Harris, E. L.** The development of the powers of a pupil. School review, 5: 286-91, May 1897.

Power rather than supply of information should be the aim in secondary schools and colleges as far as the end of sophomore year.

373. **Hitchcock, A. M.** The secondary-school teacher of English. Educational review, 22: 252-63, October 1901.

Compares the advantages and disadvantages of high school and college teaching.

374. **Hadley, A. T.** The meaning and purpose of secondary education. School review, 10: 729-41, December 1902.

375. **Butler, Nathaniel.** Method in the secondary school and college. *In* Illinois state teachers' association. Journal of proceedings, 1902. p. 94-101.

376. **Briggs, L. R.** Discipline in school and college. *In his* Routine and ideals. 1904. p. 137-79.

377. **Felmley, David.** The modern high-school curriculum as preparation for a two-year normal course, and the sort of training which makes for the best normal-school preparation. *In* National education association. Journal of proceedings and addresses, 1905. p. 524-31. Discussion, p. 531-3.

378. **Aley, R. J.** The college versus the high school—methods. Education, 27: 65-72, October 1906.

Emphasizes the need of closer union in methods.

379. **Fletcher, M. J.** High school organization and the individual student. *In* New York (State). University. University convocation. Proceedings, 1906. p. 102-11. (Education department bulletin, no. 394.)

Compares personal supervision in college and high school.

380. **Leonard, H. C.** What the high schools should do to fit students for college. Education, 27: 281-87, January 1907.

They should insist on correct habits of thought and study which will assure the requisite amount of knowledge.

381. The influence of the present methods of graduate instruction upon the teaching in the secondary school. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1907. p. 9-22.

Papers by T. M. Balliet and G. E. Myers. Balliet's paper also in School review, 16: 217-25, April 1908.

382. **Dearborn, W. F.** The relative standing of pupils in the high school and in the university. Madison, University of Wisconsin, 1909. 44 p. tables. 12°. (Bulletin of the University, no. 312. High school series, no. 6.)

Based on a detailed study made at the University of Wisconsin.

383. **Aley, R. J.** Articulation of higher and secondary education through teaching and teachers. *In* National education association. Journal of proceedings and addresses, 1909. p. 198-203.

384. **McGregor, Duncan.** The professional training of teachers for secondary schools. *In* National education association. Journal of proceedings and addresses, 1909. p. 581-87. *Also in* Western journal of education, 3: 1-12, January 1910. (Expanded.)

A vehement protest against further domination of the high schools by the universities.

385. **Denney, C. C.** The relation that the state normal sustains to the high schools and colleges of the state. *In* Arkansas state teachers' association. Proceedings, 1909. p. 116-20.

386. **Dearborn, W. F.** School and university grades. Madison, University of Wisconsin, 1910. 59 p. tables. 12° (Bulletin of the university, no. 368. High school series, no. 9.)

Based on a study of grades in elementary and high schools and university.

387. High-school preparation of candidates for normal-school training. *In* National education association. Journal of proceedings and addresses, 1911. p. 445-56. Discussion, p. 456-61.

Papers by David Felmley and J. R. Kirk.

388. **National education association.** Final report of the committee on high-school preparation of students for normal schools. *In its* Journal of proceedings and addresses, 1912. p. 577–86. Discussion, p. 586–89.

Based on a questionnaire sent to 41 normal schools in 25 states.

389. **Angell, J. R.** The duplication of school work by the college. School review, 21: 1–10, January 1913.

Wholly needless waste could be avoided by intelligent collaboration of school and college teachers.

VI. CURRICULUM.

390. Courses of study—adjustment of school programmes. *In* U. S. Bureau of education. Report of the Commissioner, 1889–90. v. 2. p. 1111–35.

Extracts from various important papers and articles on the subject.

391. **Coy, E. G.** How far is it advisable for high schools and academies to undertake the advanced requirements in French and German as a substitute for the advanced requirements in Latin, Greek, and mathematics for admission to college? *In* New England association of colleges and preparatory schools. Proceedings, 1890. p. 3–11. Discussion, p. 52–62. *Also in* Academy, 5: 399–407, November 1890.

392. **Bancroft, C. F. P.** The service rendered by the secondary school. *In* American institute of instruction. Annual meeting, 1891. p. 58–74. Discussion, p. 74–79.

"How can courses be devised which shall meet at once the wants of pupils soon to be plunged into the distractions and responsibilities of their vocations, and of the other and smaller number who have before them the prospect of long courses of further training?"

393. **Hill, F. A.** The practicability of abridging the course preparatory to college. *In* New England association of colleges and preparatory schools. Proceedings, 1891. p. 1–17. Discussion, p. 25–42. *Also in* Academy, 6: 405–21, November 1891. Dicussion, p. 429–46.

394. **Hawes, E. S.** The place of work preparatory for college in relation to other work in secondary schoools. Academy, 7: 153–66, April 1892.

395. **Carman, G. N.** The course of study in secondary schools. *In* National education association. Journal of proceedings and addresses, 1893. p. 193–96.

"Is there a course of study which is at the same time the best preparation for life and for college?"

396. **Eliot, C. W.** Secondary school programs and the conferences of December 1892. *In* New England association of colleges and preparatory schools. Proceedings, 1893. p. 19–33. *Also in* School review 1:, 603–17, December 1893. *In* Educational review, 7: 105–10, February 1894.

Describes in full the difficulties attending the work of the Committee of ten.

397. **National educational association.** Report of committee on secondary school studies . . . with the reports of the conferences . . . held Dec. 28–30, 1892. Washington, 1893. 249 p. 8°.

Reprintd with analytical and topical index, by American book co., New York, 1894. Also reprinted (with omissions) in U. S. Bureau of education. Report of the Commissioner. 1892–93, v. 2. p. 1415–48. Followed by papers relating to the Report, with a bibliography of articles on it.

Known as the Report of the Committee of ten.

398. **Bancroft, C. F. P.** Report of the Committee of ten from the point of view of the endowed academy. Educational review, 7: 280–85, March 1894.

Colleges and secondary schools should construct and adopt an outline of a rational, liberal program for secondary schools, and let minor details take care of themselves.

399. **Bradley, J. E.** The report of the Committee of ten from the point of view of the smaller colleges. Educational review, 7: 370–74, April 1894.

Report has given a powerful stimulus to secondary education.

400. **Sachs, Julius.** The report of the Committee of ten from the point of view of the college preparatory school. Educational review, 8: 75–83, June 1894.

An appreciative article.

401. **Baker, J. H.** Review of the Report of the Committee of ten. *In* National education association. Journal of proceedings and addresses, 1894. p. 645–60. tables. Discussion, p. 661–69. *Also in* New York (State). University. University convocation. Proceedings, 1894. p. 307–11. (In part only.) *Also in* U. S. Bureau of education. Report of the Commissioner, 1892–93. v. 2, p. 1473–83. *Also in* Baker, J. H. Education and life. 1900. p. 50–68.

402. **New England association of colleges and preparatory schools.** Official report of the second special meeting . . . Dec. 29, 1894. Hamilton, N. Y. 1895. 35 p. 8°. *Reprinted from* School review, 3: 152–84, March 1895.

Discusses resolutions favoring the adoption of the program recommended by the N. E. A. committee of ten, as a means of closer cooperation of high schools and colleges.

403. **Butts, W. H.** National uniformity in secondary instruction. School review, 3: 65–86, February 1895. Educational review, 9: 148–58, has same substance in briefer form under title "Uniform standards in college preparation."

"Valuable collection of facts and opinions from representative schools and colleges on specific points in secondary curricula."

404. **Thurber, Samuel.** Rigid courses versus optional studies. School review, 3: 206–11, April 1895.

Colleges should modify their requirements to meet conditions in secondary schools.

405. **O'Leary, C. M.** To what extent are all studies of equal educational value in preparation for college? *In* New York (State). University. University convocation. Proceedings, 1895. p. 896–99. Discussion, p. 899–903. (Regents' bulletin no. 32.) *Also in its* Annual report of the Regents, 1895. v. 2, p. 896–903.

406. **Schaeffer, C. A.** How far should the college determine the course in the high school, and how far should the high school determine the course in the college? *In* Iowa state teachers' association. Proceedings, 1895–96. p. 81–84. Discussion, p. 84–90.

407. **Butler, W. R.** Should preparatory and non-preparatory pupils receive identical treatment in high schools? Educational review, 12: 473–86, December 1896.

A discussion of the attitude of the Committee of ten on this question.

408. **Schurman, J. G.** College entrance requirements and the high school curriculum. *In* New York (State). Associated academic principals. Proceedings, 1896. p. 64–78. (Regents' bulletin no. 40.) *Also in its* Annual report of the regents, 1896. p. 64–78.

Discusses the question from the point of view of the philosophical classification of knowledge.

409. **O'Shea, M. V.** Relative values in secondary and higher education. School review, 6: 289–306, May 1898.

Discusses the basic principles of curriculum-making and their application in high school and college.

410. **Green, J. M.** Are there studies that, as constants, should be pursued in some measure in every course in the secondary schools, and in the freshman and sophomore years of the college? If so, what are these constants, and what should be the minimum requirement in each of these six years? *In* National education association. Journal of proceedings and addresses, 1898. p. 702–7.

411. **Hinsdale, B. A.** Principles underlying the making of courses of study for secondary schools stated from the point of view of the university. School review, 6: 606–14, October 1898.

412. **Sachs, Julius.** Position of the preparatory schools in the present educational movement. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1898. p. 106–31.

Diverse college requirements force an elective program upon the secondary schools; this curriculum might be simplified if the colleges would cooperate.

413. **Jones, R. F** The relations of school and college. Educational review, 18: 467–78, December 1899.

Discusses the character of college work as it should be determined by the age and ability of entering students.

414. **Morrison, G. B.** Do our high schools prepare for college and for life, in accordance with the present requirements of both? *In* National education association. Journal of proceedings and addresses, 1899. p. 603–10.

An argument for the negative.

415. **Amen, H. P.** Is the curriculum crowded? Educational review, 19: 417–36, May 1900.

Based chiefly on experience with Harvard requirements at Exeter. Discussion, p. 455–71.

416. **Boone, R. G.** Suggestion vs. prescription in courses of study. Education, 22: 1–9, September 1901.

417. **Hall, G. S.** The high school as the people's college. *In* National education association. Journal of proceedings and addresses, 1902. p. 260–68. Discussion, 268–72. *Also in* Pedagogical seminary, 9: 63–73, March 1902.

Outlines a course with English, science and motor-training as the fundamental subjects.

418. **Stauffer, A. F.** Effect of college requirements on high school curricula. *In* New Jersey state teachers' association. Annual report and proceedings, 1902. p. 113–27.

419. **Wilkinson, J. W.** Problems in high school curricula. Education, 24: 193–208, December 1903.

Summary of existing conditions based on specific facts.

420. Reports of committees on shortening the college course. School review, 12: 15–28, January 1904.

Reports on extending the work of the secondary school, from the standpoint of the elementary school, the high school and the college, made to the Conference of high schools affiliated with the University of Chicago.

421. **Liddeke, Frederick.** The extension of the high-school course. School review, 12: 635–47, October 1904.

A six-year course would make elementary, secondary and higher education independent and yet so coordinated that one might drop out at any point and get the best training, or pass through the university.

422. **Brown, J. S.** Present development of secondary schools according to the proposed plan. School review, 13: 15–18, January 1905.

On the extension of the high school course to include the first two years of college work.

423. **Eliot, C. W.** The fundamental assumptions in the Report of the Committee of ten (1893). Educational review, 30: 325–43, November 1905.

Defense against the attack on the report made by G. Stanley Hall in his "Psychology of adolescence."

424. **Sachs, Julius.** The elimination of the first two college years: a protest. Educational review, 30: 488–99, December 1905.

Arguments against the assumption of this work by the secondary schools.

425. **Tucker, S. M.** The relation of the southern college to the public school. *In* Southern educational association. Journal of proceedings and addresses, 1905. p. 125–33. *Also in* Southern educational review, 3: 834–42, March 1906.

Shows the dangers of the present requirements and how the colleges can eliminate them.

426. **Holgate, T. F.** The relation of the high school program to entrance requirements in the colleges of Illinois. *In* Illinois state teachers' association. Journal of proceedings, 1905. p. 118–20.

427. **Lilly, J. C.** Ideal condition for admission to college. *In* Missouri state teachers' association. Proceedings, 1905. p. 162–65.

428. **Salmon, L. M.** The encroachments of the secondary schools on the college curriculum. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1906. p. 56–63. Discussion, p. 63–78.

429. **Sloan, N. B.** Education and college preparation. *In* Michigan schoolmasters' club. Journal, 1907. p. 22–27.

One course in the high school will accomplish both ends.

430. **Thompson, Holland.** Is college preparation in three years practicable? *In* Schoolmasters' association of New York and vicinity. Monthly report, v. 15, p. 28–37. January 1908.

431. **Jordan, D. S.** The high school course. Popular science monthly, 73: 28–31, July 1908.

Traditional college specification of subjects an impertinence; the high school graduate trained in the conduct of life is also fitted to enter college.

432. **Magruder, W. T.** The cosmopolitan high-school curriculums from the standpoint of colleges of engineering. *In* National education association. Journal of proceedings and addresses, 1908. p. 599–605.

433. **Chadsey, C. E.** The relation of the high school to the community and to the college. *In* National education association. Journal of proceedings and addresses, 1909. p. 203–7. American school board journal, 38: 3, 18, June 1909.

Pleads for greater flexibility in the high school course of study.

434. **Brown, C. A.** The extent to which the high school should adjust its courses to college requirements. *In* Alabama educational association. Official proceedings, 1909. p. 153–58.

435. **Harper, C. F.** What constitutes preparation for college from the point of view of a high school principal. Education, 31: 585–98, May 1911.

A few fundamental subjects taught by competent teachers and studied by pupils until mastered would result in character, and inspiration for higher learning.

436. **Moore, E. C.** Present tendencies in secondary education. *In* Vermont university. College requirements and the secondary curriculum. [1911?] p. 6–23.

The prevailing tendency necessitates a reconstruction of the course of study, regrouping all the courses under vocational heads.

437. **McLane, C. L.** The junior college, or upward extension of the high school. School review, 21: 161–70, March 1913.

How the high school meets the requirements for advanced training in California.

ELECTIVES.

438. **Shaler, N. S.** Election of studies in secondary schools: its effect, in their relation to the colleges. Educational review, 15: 416–23, May 1898.

Followed (p. 424–55) by papers on the subject of electives in secondary schools, from different points of view, by Samuel Thurber, John Tetlow, C. W. Eliot, and G. H. Martin.

439. **Nightingale, A. F.** Rigid vs. elastic courses of study for secondary schools. School review, 6: 307–20, May 1898.

A protest against restricting the number and kind of studies in secondary schools and the first two years of college.

440. **Steele, W. L.** To what extent should the high-school pupil be permitted to elect his work? Public school journal, 17: 519–22, June 1898. *Also in* National education association. Journal of proceedings and addresses, 1899. p. 331–36.

Test of experience shows the good results of the elective system.

441. Extension of elective system in high schools and academies: discussion. *In* New York (State). University. University convocation. Proceedings, 1898. p. 218–50. (Regents' bulletin no. 45.) *Also in its* Annual report of the Regents, 1898. p. 218–50.

442. Elective studies in secondary schools. Educational review, 18: 201–04, September 1899.

Describes the elective system in the Denver schools allowing for college requirements.

443. Should colleges accept more electives for entrance? Discussion. *In* New York (State). University. University convocation. Proceedings, 1899. p. 320–53. *Also in its* Annual report of the Regents, 1899. p. 320–53.

444. **Ramsay, C. C.** Elective system in high schools. Education, 20: 557–65, May 1900.

Favorable arguments.

445. **Nightingale, A. F.** Election in high schools. School review, 9: 65–74, February 1901.

The high school is the school of the people, and the college should not make it suffer.

446. **Schmitt, C. D.** The proper limitation of elective work in school and college. School review, 9: 92–100, February 1901.
What studies should appear in the high school curriculum and how soon should choice appear?

447. **Hanus, P. H.** Two contemporary problems in education. Popular science monthly, 58: 585–94, April 1901. *Also in his* Modern school. 1904. p. 71–95.
First half of the paper discusses the elective system in schools and colleges.

448. **Robinson, O. D.** Constants and electives in the high school. School review, 9: 243–51, April 1901.
Plan providing equally well for those in preparation for college and those for whom the high school is a finishing school.

449. **Ballantine, W. G.** The "fit" required by New England colleges. School review, 11: 263–68, April 1903.
How the tyranny of the colleges has hindered the progress of the secondary schools toward the elective system.

450. **Carman, G. N.** The secondary school in the Middle West. Educational review, 29: 286–93, March 1905.
A discussion of the widespread acceptance of the principle of election of studies.

VII. SPECIAL SUBJECTS.

ENGLISH.

(1890—1904.)

451. **Briggs, L. B. R.** The correction of bad English, as a requirement for admission to Harvard college. Academy, 5: 302–12, September 1890.
Shows the good results of such tests.

452. **Wright, C. B.** What the college has a right to expect in English from the high school. Academy, 5: 467–73, December 1890.

453. **Pancoast, H. S.** College entrance requirements in English. Educational review, 3: 132–44, February 1892.
A criticism of the books commonly read in preparatory English.

454. **Beers, H. A.** Entrance requirements in English at Yale. Educational review, 3: 427–43, May 1892. *Also in his* Points at issue. 1904. p. 3–31.
How far should colleges go in specifying detailed work in preparatory English?

455. **Penniman, J. H.** The study of English in school and college. School review, 1: 462–70, October 1893.
Problems brought up by the imperfect understanding of the division of work between school and college.

456. Work in English in the colleges and preparatory schools. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1893. p. 78–108.
Papers by J. C. Welling, J. M. Hart, Edward Brooks, Wilson Farrand, and discussion.

457. **Association of colleges and preparatory schools of the Middle states and Maryland.** Report of Committee on entrance requirements in English, [followed by five papers and discussion.] *In its* Proceedings, 1894. p. 61–94. Abstract of report in School review, 2: 562–67, November 1894. Abstract of discussion in School review, 3: 92–100, February 1895. Abstract of report also in Educational review, 8: 176–78, November 1894.

458. **New England association of colleges and preparatory schools.** Shall the recommendations of the Philadelphia conference on admission requirements in English be adopted by this association? *In its* Proceedings, 1894. p. 71–91. *Also in* School review, 2: 661–81, December 1894.
Discussion of the report made to the Association of colleges and preparatory schools of the Middle states and Maryland.

459. **Henry, W. E.** College requirements and high school preparation in English. *In* Indiana college association. Proceedings, 1894. p. 15–24.

460. **Jones, R. D.** College entrance English. *In* National education association. Journal of proceedings and addresses, 1897. p. 684–94.

Appears in expanded form in Examination bulletin no. 13 of the University of the State of New York, June, 1897, p. 531–94.

Emphasizes the diversity of opinion among colleges.

461. **Henneman, J. B.** The national conference on uniform entrance requirements in English. University of Tennessee record, p. 54–63, January 1898.

462. **Denney, J. V.** English requirements. *In* North central association of colleges and secondary schools. Proceedings, 1898. p. 42–47. *Also in* School review, 6: 339–43, May 1898.

Recommends that greater attention be paid to composition, with extensive, rather than intensive study of prescribed classics.

463. **Scott, F. N.** The report on college entrance requirements in English. Educational review, 20: 289–94, October 1900.

Discussion of the N. E. A. report.

464. **Van Slyck, F. G. N.** Working conditions in the high school with regard to college requirements in English. School review, 9: 316–23, May 1901.

Conditions which make it difficult for the high school to satisfy the demands of the college.

465. **Scott, F. N.** College-entrance requirements in English. *In* North Central association of colleges and secondary schools. Proceedings, 1901. p. 37–49. *Also in* School review, 9: 365–78, June 1901.

"Rationale of the subject."

466. **Abbott, Allan.** Entrance English from the boy's point of view. Education, 22: 78–88, October 1901.

467. How should the entrance examination paper in English be constructed? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1901. p. 100–129. (New York (State). University. Regents' bulletin no. 57.) *Also in* New York (State). University. Annual report of the Regents, 1901. p. 100–29.

Papers by E. E. Hale, jr., and Mrs. L. S. B. Saunders, followed by discussion.

468. **Lowell, D. O. S.** The setting of a college admission paper in English, with practical illustrations. School review, 10: 755–64, December 1902. Discussion, p. 764–77.

469. **Harris, J. H.** Discussion of English masterpieces required for entrance to college. *In* Michigan schoolmasters' club. Journal, 1902. p. 8–12.

A plea for wider options in reading material.

470. **Stryker, W. M.** The different and indifferent degrees of preparation for college that appear in English, specially in composition, spelling, and plain, old-fashioned reading aloud. *In* New York (State). Associated academic principals. Proceedings, 1902. p. 366–73. Discussion, p. 373–79. (New York (State). University. High school department bulletin no. 19.)

471. **Bacon, Louise.** A suggestion as to the teaching of writing in secondary schools. School review, 11: 623–35, October 1903.

Poor teaching in the preparatory schools makes the colleges duplicate their work in rhetoric.

472. **Evans, M. J.** How much work is done in American literature in the high school, and by what methods? School review, 11: 647–54, October 1903.

Compares the high school overemphasis with the lack of stress laid upon American literature by the colleges.

473. **Harrison, T. P.** College entrance requirements in English. *In* Southern educational association. Journal of proceedings and addresses, 1903. p. 61–68.

Suggests, as possible methods of improving conditions, better teaching on the part of the preparatory schools, and fuller explanations of the requirements by the colleges.

474. College requirements in English. *In* Southern educational association. Journal of proceedings and addresses, 1903. p. 121–33.

Papers by C. W. Kent, C. A. Smith, and W. L. Weber.

475. **Shackford, M. H.** Literature for admission to college. Educational review, 27: 410–16, April 1904.

Criticism of College board requirements, with suggestions as to the best way of making the most of them and giving all possible to the students.

476. **Bowles, R. N.** An investigation into English requirements. School review, 12: 331–39, May 1904.

Summary of opinions of secondary schools regarding the papers of the College entrance examination board.

477. **Hanson, C. L.** Recommendations of the Committee on college entrance requirements in English. School review, 12: 339–47, May 1904.

Presented to the New England association of teachers of English.

478. **Bouton, Eugene.** High school English with special reference to college entrance requirements. Education, 25: 36–44, September, 1904.

479. **Tupper, F. A.** The requirements in college English from the standpoint of the preparatory schools. *In his* Educational broth. 1904. p. 37–48.

Requirements make for pedantic methods of teaching which do not lead to an appreciation of the literary quality.

(1905–1913.)

480. **Thurber, Samuel.** Voluntary reading in the classical high school from the pupil's point of view. School review, 13: 168–79, February 1905.

A plea for more recreation and less drill in the books prescribed by the colleges.

481. **Owen, J. M.** Some student opinions on entrance requirements in English. Education, 25: 619–26, June 1905.

Conclusions drawn from frank replies to questions asked of pupils in Lewis Institute, Chicago.

482. **Stoddard, F. H.** The uniform entrance examinations in English. Educational review, 30: 375–83, November 1905.

Review of 25 years' progress, resulting in the formation of the conference for recommending requirements.

483. **Jordan, M. A.** Report of the delegates to the conference on uniform college entrance requirements in English. School review, 13: 795–800, December 1905.

Abstract of the conclusions reached.

484. **Foster, W. T.** A talk with teachers of English on college entrance requirements. Educational review, 31: 198–205, February 1906.

Criticizes the prescribed list of books.

485. **Shackford, M. H.** The practical side of preparation in literature. School review, 14: 223–26, March 1906.

Most students from preparatory schools are helpless and should be taught to do a little research for themselves. Discussed in School review, 14: 686–9, November 1906.

486. **Benedict, G. W.** Preparation in English from the standpoint of the college. Education, 26: 534–40, May 1906.

487. **Moody, L. B.** The American college girl's ignorance of literature. Journal of pedagogy, 18: 257–64, June 1906.

The fault lies in the college requirements.

488. **Witham, R. A.** The American college girl's ignorance of literature: a second point of view. Journal of pedagogy, 19: 13–23, September 1906.

More conferences between colleges and preparatory schools would soon make a better understanding of the requirements.

489. **Shackford, M. H.** Questions in English. Education, 27: 231–39, December 1906.

490. **Colby, J. R.** Literature and life after the elementary years. *In his* Literature and life in school. 1906. p. 151–77.

By setting undue value on certain types of knowledge, the colleges prevent the proper teaching and appreciation of literature in secondary schools.

491. **Tanner, G. W.** Report of the committee appointed by the English conference to inquire into the teaching of English in the high schools of the Middle West. School review, 15: 32–45, January 1907.

Based upon a study of the schools in conference with the University of Chicago.
Attitude of the teachers shows that college requirements must be broadened.

492. **Nettleton, G. H.** Literature and the college examiner. Independent, 62: 844–47, April 11, 1907.

Proposes a "change in attitude from insistence upon petty detail to a broader conception of the real purpose of the examination test."

493. **Mitchill, T. C.** Entrance English requirements. Nation, 84: 382-83, April 25, 1907.

Letter from the point of view of a high school teacher.

494. **Neilson, W. A.** What the college has a right to expect of the schools in English. School review, 16: 73-77, February 1908.

It should expect a great deal that may never be examined upon.

495. **Pearson, H. G.** Historical sketch of the joint or national conference on entrance requirements in English, with especial reference to the conference of 1908. School review, 16: 646-59, December 1908.

496. **Heydrick, B. A.** The relation of the college entrance requirements to the high school course in English. *In* High school teachers' association of New York city. Year book, 1908-9. p. 45-52.

497. **Scott, F. N.** What the West wants in preparatory English. School review, 17: 10-20, January 1909.

Effects of the "preparatory fallacy," and how conditions may be improved.

498. **Robinson, M. C.** Wanted—an additional college requirement in English. School review, 17: 190-92, March, 1909.

A plea for a test in reading aloud.

499. College entrance requirements in English. Educational review, 37: 426-29, April 1909.

Contains the report of the Conference on uniform entrance requirements, with editorial comments.

500. **Fernald, G. B.** English examinations for college. Nation, 88: 483-84, May 13, 1909.

A plea for more questions on subjects outside of prescribed books read.

501. The framing of an entrance examination paper in English. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1909. p. 99-135.

Papers by C. G. Child, T. C. Mitchill, and discussion.

502. What should the colleges demand of the high schools in the matter of literature? *In* New York state teachers association. Proceedings, 1909. p. 484-530. (New York (State) Education department. Bulletin, no. 483.)

Papers by W. F. Cross, H. N. Drury, E. F. Garrigues, and discussion.

503. What should the colleges ask of the high schools in the matter of composition? Discussion. *In* New York state teachers' association. Proceedings, 1909. p. 531-622. (New York (State) Education department. Bulletin, no. 483.)

504. **Chubb, Percival.** College entrance requirements in English. *In* Schoolmasters' association of New York and vicinity. Annual report, 1909-10. p. 28-35.

505. **Perry, F. M.** A consideration of proposed changes in college entrance requirements in English. Educational review, 39: 194-98, February 1910.

506. **Aiken, W. E.** The entrance requirements bogy. Education, 31: 131-32, October 1910.

507. **Linn, J. W.** What the university expects of high-school students in English. School review, 19: 96-102, February 1911.

508. **Hosic, J. F.** The questions at issue. Preliminary report of a committee on college entrance requirements in English. *In* National education association. Journal of proceedings and addresses, 1911. p. 592-98. Discussion, p. 604-7.

509. **Hosic, J. F.** College-entrance requirements in English and the high school course. Boston, Houghton [1912.] 18 p. 12°. (English problems, no. 2.)

Topics: Unsatisfactory relations of colleges and secondary schools; history of the English requirements; suggestions as to the solution.

510. The influence of the uniform entrance requirements in English. A brief chapter of educational history, together with a summary of the facts so far obtained by a committee of the National education association. English journal, 1: 95-121, February 1912.

. Includes the latest report of the National conference on uniform entrance requirements in English. Selected references, p. 118-21.

511. **Hughes, H. S.** English literature and the college freshman. School review, 20: 583–92, November 1912.

Results of tests showing the misinformation and lack of knowledge of English literature with which students enter college.

512. **Hosic, J. F.** Report of the Committee on college-entrance requirements in English. *In* National education association. Journal of proceedings and addresses, 1912. p. 707–13.

Summary of answers received from over 700 persons (chiefly high school teachers) with conclusions.

513. **Hosic, J. F.** Progress in articulating school and college English. *In* National education association. Journal of proceedings and addresses, 1912. p. 761–63.

514. **Hosic, J. F.** If there were no college entrance requirements in English, what would we teach in the high schools? *In* North Central association of colleges and secondary schools. Proceedings, 1912. p. 55–67. Discussion, p. 67–74.

515. **Hopkins, A. B.** English literature and the college freshman—a reply. School review, 21: 134–38, February 1913.

First article in November, 1912 number by H. S. Hughes.

516. College entrance requirements in English. North Carolina high school bulletin, 4: 142–47, no. 3, July 1913.

Papers by F. P. Graham, from the viewpoint of the high school, and Elizabeth A. Colton, from the point of view of the college, read at the North Carolina high school conference, May 1913.

517. **Carpenter, G. R.** College entrance requirements in English. *In* Carpenter, G. R., Baker, F. T., *and* Scott, F. N. The teaching of English in the elementary and the secondary school. 1913. p. 283–92.

Mainly a discussion of the recommendations of the Conference on uniform requirements. Bibliography, p. 283, 347–50, 377–78.

MODERN LANGUAGES.

518. **Tetlow, John.** Is a modification of the present modern language requirements for admission to college desirable and practicable? *In* New England association of colleges and preparatory schools. Journal of proceedings and addresses, 1888. p. 1–17. *Also in* Academy, 3: 453–69, November 1888.

519. **Brandt, H. C. G.** Should the elements of French and German be required for admission to all colleges? *In* New York (State). University. University convocation. Proceedings, 1888. p. 51–59. *Also in its* Annual report of the Regents, 1889. p. 51–59.

Arguments for the affirmative. Discussed by H. S. White, p. 59–61.

520. **Grandgent, C. H.** The modern languages as an alternative in college admission requirements. Educational review, 11: 433–43, May 1896. Discussion, p. 443–51.

Considered especially as a substitute for Greek and Latin.

521. **Modern language association of America.** Report of the Committee of twelve on the teaching of modern languages. *In* National education association. Journal of proceedings and addresses, 1899. p. 707–55. *Also in* U. S. Bureau of education. Report of the Commissioner, 1897–98. v. 2, p. 1391–1433. *Also reprinted separately.*

Recommendations of preparatory requirements in French and German. Part of the N. E. A. report on college entrance requirements.

522. **White, H. S.** On college entrance requirements in French and German. Educational review, 19: 143–52, February 1900.

Discussion of the N. E. A. report.

523. **Cohn, Adolphe.** The adjustment between secondary school and college work in modern languages. School review, 12: 468–72, June 1904.

524. Modern languages in secondary schools and colleges. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1904. p. 9–40.

Papers by Julius Sachs, T. F. Crane, and W. U. Vreeland.

525. **Kayser, C. F.** College entrance requirements in modern languages. *In* Schoolmasters' association of New York and vicinity. Annual report, 1905-06. p. 61-70.

526. **Bruce, M. S.** College entrance requirements in French. Educational review, 33: 406-13, April 1907.

Pleads for an oral requirement.

527. **Young, W. H.** Is modern language teaching a failure? School review, 16: 258-64, April 1908.

Based on a study of the records of the College entrance examination board, comparing the modern languages and the classics.

528. **New England modern language association.** Report of the committee on college entrance requirements, May 8, 1909. Boston, 1909. 42 p. 8°. (Publications, v. 1, no. 5A.)

Summary of views of colleges and schools, with recommendations of the committee.

529. **Douay, G.** The preparation of students in French for entrance to college. *In* Missouri state teachers' association. Proceedings, 1909. p. 297-302.

530. **Kennedy, Joseph.** College entrance requirements in foreign languages. American education, 1: 494-99, March 1910.

"Languages other than English should take their place among other electives for college entrance."

531. **Tuckerman, Julius.** Modern-language teaching in New England. *In* National education association. Journal of proceedings and addresses, 1910. p. 519-22.

CLASSICS.

532. Should Homer be taught in the preparatory schools? *In* New England association of colleges and preparatory schools. Proceedings, 1889. p. 1-22, 49-61. *Also in* Academy, 4: 428-49, 476-88, November 1889.

Papers by T. D. Seymour, R. P. Keep, and discussion.

533. **Wheeler, B. I.** College requirements in Greek. School review, 1: 73-83, February 1893.

Statistical investigation and comparison of existing requirements in 172 colleges and universities.

534. **New England association of colleges and preparatory schools.** Requirements and preparatory courses in Latin and Greek. *In its* Proceedings, 1895. p. 61-89. *Also in* School review, 3: 655-83, December 1895.

Discussion of the statement proposed by the Commission of colleges in New England on admission examinations.

535. **Morris, E. P.** The ideal college entrance requirement in Latin. *In* Schoolmasters' association of New York and vicinity. Annual report, 1899-1900. p. 32-50.

Essentials of an ideal preparation by the schools, and principles in regard to the duty of colleges in forming and stating requirements.

536. Uniform college entrance in Latin. *In* Schoolmasters' association of New York and vicinity. Annual report, 1899-1900. p. 72-96.

Brief papers by J. T. Buchanan, Caskie Harrison, G. H. Hooper, and discussion.

537. **Harris, J. H.** The report of the Committee of twelve on college entrance requirements in Greek. *In* Michigan schoolmasters' club. Journal, 1900. p. 13-17.

A discussion of the N. E. A. report of 1899.

538. **McCrea, N. G.** The Latin papers of the College entrance examination board. Educational review, 28: 28-37, June 1904.

Certain defects, especially lack of practical control of the language, shown by a comparative study of the papers handed in by the candidates.

539. **Bishop, J. R.** Do Latin and Greek need something done for them in the high schools? School review, 13: 689-95, November 1905.

540. **Kirtland, J. C.** The college requirements and the secondary-school work. School review, 13: 818-27, December 1905. *Abridged in* National education association. Journal of proceedings and addresses, 1905. p. 470-73. Discussion, p. 473-4.

A plea for sight translation examinations for college entrance.

541. **Towle, H. F.** Requirements in Latin and Greek. *In* Schoolmasters' association of New York and vicinity. Annual report, 1905–06. p. 71–76. Discussion, p. 76–83.

542. **Smalley, Frank.** Status of classical studies in secondary schools. Classical journal, 1: 111–19, March 1906.

Statistics at Syracuse university show a decline of the classics; needs of the secondary schools to prevent this.

543. **Main, J. H. T.** Greek or Latin for admission to college. School review, 16: 453–62, September 1908.

A plea for greater recognition of Greek.

544. **Knapp, Charles.** The reform of college entrance examinations in Latin. School review, 16: 520–32, October 1908. *Also in* Educational review, 36: 342–55, November 1908.

In favor of requiring the list of 2,000 words compiled by Gonzalez Lodge in The vocabulary of high school Latin, New York. 1909.

545. **Browne, G. H.** The essential vocabulary of high-school Latin—the principle of its selection and the reform of entrance examinations. School review, 17: 46–54, January 1909.

Explanation and defense of this article appears in the March number, v. 17, p. 196–97.

546. **De Forest, F. M.** College requirements in Latin and the school curriculum. Educational review, 38: 109–21, September 1909.

From the high-school point of view, putting the blame for defective preparation on rigid requirements.

547. **Kirtland, J. C.** Report of the Commission on college entrance requirements in Latin. Classical journal, 5: 155–60, February 1910. *Also in* School review, 18: 115–20, February 1910. Educational review, 39: 182–87, February 1910.

Commission appointed by the American philological association.

548. **Hale, W. G.** Latin composition in the high school. As the college conceives it. School review, 18: 225–40, April 1910.

A comparison of college entrance examinations.

549. **Kirtland, J. C.** The new Latin requirements. Classical journal 5: 340–52, June 1910.

Discussion of the report of the Commission of the American philological association.

550. **Kirtland, J. C.** The consequents of the commission's report. Classical journal, 6: 330–42, May 1911.

Commission on college entrance requirements in Latin, appointed by the American philological association.

HISTORY.

551. **New England association of colleges and preparatory schools.** Report of the conference on college entrance requirements in history . . . Hamilton, N. Y. [1895.] 21 p. 8°

Reprinted from School review, 3: 469–85, October 1895.

Recommendations as to courses, methods of teaching, and examinations.

Discussed at the regular meeting of the Association in the autumn of 1895.

552. **New England association of colleges and preparatory schools.** Entrance requirements in history. *In its* Proceedings, 1895. p. 3–37. *Also in* School review, 3: 597–631, December 1895.

Discussion of the recommendations made by the conference on entrance requirements in history.

553. **Hart, A. B.** College entrance requirements in history. Educational review, 10: 417–29, December 1895.

Discussion of resolutions made to the New England association, October, 1895.

554. **North Central association of colleges and secondary schools.** College entrance requirements in history. School review, 4: 263–72, May 1896.

Discussion of the report of the New England association committee, made in 1895.

555. **Salmon, L. M.** Unity in college entrance history. Educational review, 12: 151–68, September 1896.

A plea for the study of general history in high schools.

556. **Stephens, H. M.** Shall historical studies be a necessary part of college entrance requirements? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1896. p. 33–41. Discussion, p. 41–48.

557. **American historical association. Committee of seven.** College entrance requirements. *In its* Study of history in schools, 1889. p. 119–36.
Recommendations concerning organization of the history course to meet college requirements, with suggestions as to entrance examinations.

558. **Whitton, Frederick.** The secondary schools and the colleges. Nation, 69: 108–9, August 10, 1899.
Says the recommendations of the Committee of seven of the American historical association are impossible.

559. **Learned, H. B.** College preparatory work in American history. Educational review, 22: 397–404, November 1901.
Based on a study of 300 entrance papers at Sheffield scientific school.

560. **Mace, W. H.** Defects of history teaching in high school, as revealed in college. *In* New York (State). Associated academic principals. Proceedings, 1901. p. 665–71. (New York (State). University. High school department. Bulletin no. 12.)

561. **Salmon, L. M.** How should the entrance examination paper in history be constructed? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1902. p. 101–14. Discussion, p. 114–27. (New York (State). University. Regents' bulletin no. 60.) *Also in* Educational review, 26: 22–35, June 1903.

562. **Prettyman, Virgil.** Lack of uniformity in the history requirements for admission to college. Educational review, 42: 516–18, December 1911.
Differences in the requirements of 17 eastern colleges and universities.

MATHEMATICS.

563. **Safford, T. H.** The mathematical preparation for college. Academy, 7: 210–17. Discussion, p. 239–44. May 1892.

564. **Townsend, E. J.** Analysis of the failures in freshman mathematics. School review, 10: 675–86, November 1902.
Shows need of changes and improvements in high school teaching.

565. Entrance requirements in mathematics. Educational review, 26: 305–8, October 1903.

566. **Packard, J. C.** Mathematics and the coordination of mathematics and physics in secondary schools. School review, 11: 798–807. Discussion, p. 807–16. December 1903.
College entrance requirements place a premium upon pure mathematics; schools should ask for more of the applied.

567. **Hedrick, E. R.** On the relation between mathematical research and secondary instruction. *In* Michigan schoolmasters' club. Journal, 1903. p. 18–30.

568. **French, J. S.** College entrance examinations in mathematics. Educational review, 27: 305–7, March 1904.
Discusses the article by E. J. Goodwin in the December, 1903 number.

569. Do the college entrance requirements in mathematics demand a disproportionate amount of time in the secondary school curriculum? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1905. p. 88–117.
Papers by J. L. Tildsley, D. E. Smith, Wilson Farrand, and discussion.

570. **Marsh, Walter R.** Are college entrance requirements in mathematics too great in quantity? *In* Schoolmasters' association of New York and vicinity. Annual report, 1905–6. p. 41–47.

571. **Hawkes, H. E.** Secondary mathematics from a college standpoint. *In* New York state science teachers' association. Proceedings, 1906. p. 145–51. (New York (State). Education department. Secondary education bulletin no. 34.)

572. **Webb, H. E.** The relation between high school and college mathematics. *In* New York state science teachers' association. Proceedings, 1906. p. 159–68. (New York (State). Education department. Secondary education bulletin no. 34.)

573. **Crenshaw, B. H.** The teaching of high school mathematics from the college point of view. *In* Alabama educational association. Official proceedings, 1909. p. 186–92.
Suggestions as to methods of teaching to remedy defects mentioned.

574. **Betz, William.** Preliminary report of the "National geometry syllabus committee" and its practical pedagogical implications. *In* National education association. Journal of proceedings and addresses, 1910. p. 511–15.
Historical view of the question and account of the work of the Committee so far.

575. **International commission on the teaching of mathematics.** Examinations in mathematics other than those set by the teacher for his own classes. Washington, 1911. 72 p. 8°. (U. S. Bureau of education. Bulletin, 1911, no. 8.)
Reports of committees dealing with entrance to college by college, board, and state examinations, with specimen examination questions.

576. **Ponzer, E. W.** Note on the preparation of college freshmen in elementary algebra. School science and mathematics, 11: 737–39, November 1911.
Shows deficient preparation in certain topics by results of examinations.

PHYSICS AND CHEMISTRY.

577. **Hall, E. H.** Physics as a requirement for admission to college. *In* National education association. Journal of proceedings and addresses, 1897. p. 937–42. Discussion, p. 942–44. *Also in* Educational review, 14: 140–49, September 1897.

578. **Shearer, J. S.** Relation of high school to college physics. *In* New York state science teachers' association. Proceedings, 1900. p. 919–23. Discussion, p. 924–26. (New York (State). University. High school department bulletin no. 13.)
The poor training given in high schools from the point of view of a college teacher.

579. **Miller, E. H.** Chemistry for admission to college. Educational review, 25: 85–89, January 1903.

580. **Williams, R. P.** High-school chemistry in its relation to the work of a college course. *In* National education association. Journal of proceedings and addresses, 1903. p. 873–77. Discussion, p. 877–80. *Also in* Science, n. s., 18: 330–36, September 11, 1903.

581. **Smith, L. G.** The college requirement in chemistry from the high school standpoint. School science and mathematics, 3: 389–94, January 1904.

582. **Geer, W. C.** The teaching of chemistry in the secondary schools: a study of recent practice and results. *In* New York state science teachers' association. Proceedings, 1905. p. 45–59. (New York (State). Education department. Secondary education bulletin no. 31.) *Also in* School review, 14: 275–95, April 1905.
Based on a study of note books presented for entrance to Cornell university.

583. **Sellers, J. F.** A symposium on chemistry requirements. Science, n. s., 23: 730–36, May 11, 1906.

584. The entrance requirement in physics and its relation to the physics of the college course. *In* Michigan schoolmasters' club. Journal, 1906. p. 117–25.
Papers by N. F. Smith and C. W. Greene.

585. **Greene, C. W.** The content of the first year college course in physics. *In* Michigan schoolmasters' club. Journal, 1908. p. 30–37.
With special reference to high school preparation.

586. **Millikan, R. A.** The relation of high school and college physics. *In* Eastern association of physics teachers. Proceedings, 1908. p. 2–18.

587. **Mann, C. R.** The interpretation of the College entrance examination board's new definition of the requirement in physics. Educational review, 38: 150–59, September 1909.

588. **Hall, E. H.** The relations of colleges to secondary schools in respect to physics. Science, n. s., 30: 577–86, October 29, 1909.

Gives an account of the development of the present definitions of the unit for the high school.

589. **Johnson, J. W.** The coordination of high school and college physics. *In* Mississippi teachers association. Proceedings, 1909. p. 73–76.

590. **Woodhull, J. F.** The significance of the new requirements in physics of the College entrance examination board. *In* Schoolmasters' association of New York and vicinity. Annual report, 1909–10. p. 8–16. *Also in* School science and mathematics, 10; 34–42, January 1910.

591. **Black, N. H.** The new definition in physics. *In* Schoolmasters' association of New York and vicinity. Annual report, 1909–10. p. 17–21. *Also in* Educational review, 39: 176–81, February 1910.

An interpretation of the statement of the College entrance examination board.

592. **Talbot, H. P.** The outlook for a better correlation of secondary school and college instruction in chemistry. Science, n. s., 31: 961–74, June 24, 1910.

Difficulties and deficiencies in secondary teaching.

593. **Porter, A. W.** Co-ordination of physics teaching in school and college, with special reference to electricity and magnetism. *In* Hodson, Fred. Broad lines in science teaching. 1910. p. 108–21.

594. **Smith, Alexander.** Articulation of school and college chemistry. *In* Smith, A., *and* Hall, E. H. The teaching of chemistry and physics in the secondary school. 1910. p. 44–48.

School chemistry a variable quantity; attitude of the colleges; the college must offer two independent courses.

595. **Geesling, H. L.** Correlation of high school and college chemistry from the high school point of view. School science and mathematics, 12: 476–85, June 1912.

OTHER SCIENCES.

596. **Clarke, S. F.** Natural science as a requisite for admission to college. *In* New England association of colleges and preparatory schools. Proceedings, 1891. p. 18–24. Discussion, p. 49–59. *Also in* Academy, 6: 422–28, 453–63, November 1891.

597. **Abercrombie, D. W.** Should language studies be limited in secondary schools as they are, in the interests of the sciences? *In* National education association. Journal of proceedings and addresses, 1893. p. 199–204. *Also in* School review, 1: 455–62, October 1893.

Secondary schools should offer enough science to give graduates a basis of judgment for the college electives in those studies.

598. **Davis, W. M.** Physiography as an alternative subject for admission to college. *In* New England association of colleges and preparatory schools. Proceedings, 1895. p. 38–46. *Also in* School review, 3: 632–40, December 1895.

The place of physiography among high school studies justifying it as a subject suitable for college entrance.

599. **Bergen, J. Y.** Botany as an alternative in college admission requirements. Educational review, 11: 452–64, May 1896. Discussion, p. 464–67.

600. **Tarr, R. S.** College entrance requirements in science. Educational review, 12: 57–64, June 1896.

The college should allow the school to choose one branch of science, but should require a rigid course in that subject.

601. **Remsen, Ira.** The worth of high school science studies as a part of the preparation for college. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1896. p. 48–62. Discussion, p. 62–70.

602. **Palmer, C. S.** The preparatory natural-science curriculum. *In* National education association. Journal of proceedings and addresses, 1897. p. 917–23. *Also in* School review, 6: 659–71, under title: Specialization in preparatory natural science. November 1898.

An argument for specialization in one science instead of offering an alternative between three or four sciences of one year each.

603. **Davenport, C. B.** Zoology as a condition for admission to college. *In* New York state science teachers' association. Proceedings, 1898. p. 459–65. Discussion, p. 465–76. (New York (State). University. High school department bulletin no. 2.)

Outline of the best kind of secondary instruction for meeting college requirements.

604. **Atkinson, G. F.** Entrance requirements for the university in botany and zoology. *In* New York state science teachers' association. Proceedings, 1898. p. 541–49. Discussion, p. 549–52. (New York (State). University. High school department bulletin no. 2.)

605. **Smith, Alexander.** The articulation of school and college work in the sciences. School review, 7: 411–17, 453–61, 527–35, September, October, November 1899.

Expanded from the report of the Committee of 60 to the N. E. A. See its Proceedings, 1898. p. 964–84.

606. **Crawshaw, W. H.** College entrance requirements in science. *In* New York state science teachers' association. Proceedings, 1899. p. 609–17. Discussion, p. 617–30. (New York (State). University. High school department bulletin no. 7.)

The increasing claims of science should be recognized by the colleges, but they have a right to expect good preparation.

607. **Washburn, M. F.** College entrance requirements. *In* Association of collegiate alumnae. Publications, ser. 3, no. 4, p. 55–63, February 1901.

A plea for science in secondary schools.

608. **Ganong, W. F.** Suggestions for an attempt to secure a standard college entrance option in botany. Science, n. s., 13: 611–16, April 1901.

609. **Osborn, H. L.** The differentiation of zoology for the high-school and college curriculum. School review, 9: 566–75, November 1901.

610. **Whitney, E. R.** The laboratory notebook and certification for college entrance. *In* New York state science teachers' association. Proceedings, 1902. p. 555–62. (New York (State). University. High school department bulletin no. 21.)

611. **Bigelow, M. A.** The relation of zoology in secondary school and college. *In* Lloyd, F. E., *and* Bigelow, M. A. The teaching of biology in the secondary school. 1904. p. 448–55.

Differentiation of work for school and college; zoology for college entrance credit.

612. **Mead, G. H.** Science in the high school. School review, 14: 237–49, April 1906. Discussion, p. 249–53.

With special reference to the influence of the university.

613. **Caldwell, O. W.** Should high-school botany and zoology be taught with reference to college entrance requirements? School review, 15: 27–31, January 1907.

614. **Smith, Alexander.** High school science in relation to college or university work. Educational bi-monthly, 1: 328–35, April 1907.

615. **Kyser, K. B.** Aims of physiography in the high school and its relation to university work. *In* New York state science teachers' association. Proceedings, 1909. p. 68–72.

616. **Praeger, W. E.** High school requirements in biology. *In* Michigan schoolmasters' club. Journal, 1910. p. 59–65.

617. **Hopkins, T. C.** What the college desires of the high school in the teaching of physical geography. School science and mathematics, 11: 623–25, October 1911.

OTHER STUDIES.

618. **Tetlow, John.** The enlargement of options in admission requirements, with special reference to a closer connection between the colleges and the non-classical high schools. *In* New England association of colleges and preparatory schools. Proceedings, 1896. p. 33–48. Discussion, p. 48–71. *Also in* School review, 4: 745–60. Discussion, p. 760–783, December 1896.
    A plea for vocal music, physical training, and drawing.

619. **Bailey, H. T.** Drawing in college admission requirements. Educational review, 13: 456–62. Discussion, p. 462–4. May 1897.

620. **Sargent, D. A.** The place for physical training in the school and college curriculum. American physical education review, 5: 1–17, March 1900.

621. **Bennett, C. A.** Drawing as a subject for college entrance credit. School review, 11: 31–36, January 1903.

622. **Russell, Frank.** Anthropology in American secondary schools and after. Education, 23: 530–37, May 1903.

623. **Russell, E. D.** Music as a subject to be counted for admission to college. *In* National education association. Journal of proceedings and addresses, 1903. p. 708–13.

624. Should Biblical history and literature be offered for admission to college? A symposium. Biblical world, 38: 339–45, May 1904.
    Opinions of W. J. Tucker, H. C. King, A. F. West, H. P. Judson, W. O. Thompson.

625. **Thompson, R. E.** How can instruction in such subjects as current events and civics in secondary schools be made tributary to the study of economics and government in college? *In* New England association of colleges and preparatory schools. Proceedings, 1904. p. 58–65. Discussion, p. 65–72. *Also in* School review, 12: 798–805, December 1904. Discussion, p. 805–809.

626. **Seerley, H. H.** The advisability of giving credit for work done outside of the regular courses. *In* North Central association of colleges and secondary schools. Proceedings, 1904. p. 19–26.
    Literary and editorial work, music, art and physical training should be recognized.

627. **Foster, W. T.** To what extent should artistic and utilitarian subjects in school and college count toward the degree of A. B.? School review, 13: 805–12, December 1905. Discussion, p. 812–816.
    Deals with music, painting, sculpture, architecture, design.

628. **Bailey, H. T.** College entrance examinations in art. *In* Eastern art teachers' association and the Eastern manual training association. Proceedings of the joint convention, 1906. p. 154–60.
    Table of leading universities offering drawing, p. 155.

629. **Clark, A. B.** University entrance credits in drawing. *In* National education association. Journal of proceedings and addresses, 1907. p. 838–43.
    An appeal for greater recognition of this subject by the universities.

630. **Farnsworth, C. H.** Music on an accredited basis in colleges and universities. *In* National education association. Journal of proceedings and addresses, 1909. p. 681–87.

VIII. INDUSTRIAL AND VOCATIONAL TRAINING.

631. **Hollis, I. N.** The manual training high school in its relation to preparation for college. *In* American institute of instruction. Annual meeting, 1896. p. 239–50.

632. **Adams, H. C.** Influence of higher commercial education upon the curriculum of the high school. *In* North Central association of colleges and secondary schools. Proceedings, 1903. p. 19–30. Discussion, p. 30–52.

633. **Vickroy, W. R.** Manual training as a college requirement. *In* Southern educational association. Journal of proceedings and addresses, 1905. p. 208-14. *Also in* Southern educational review, 3: 828-34, March 1906.

Theory, necessity, practice.

634. **Butler, Nathaniel.** The aim in the high school—the development of the many-sided interest, or special preparation for life? School review, 14: 135-41, February 1906.

Keep special preparation out of the high school; the university must concern itself with training for vocation.

635. **National society for the scientific study of education.** Vocational studies for college entrance. *In its* Sixth yearbook, 1907. pt. 1.

Papers by C. A. Herrick, H. W. Holmes, Theodore de Laguna, Virgil Prettyman, W. J. S. Bryan.

636. **Ellis, Alston.** Ought universities to accept business course subjects for admission? *In* National association of state universities. Transactions and proceedings, 1907. p. 191-94.

They should accept them with very great hesitation.

637. **Price, S. E.** Shall the high school curriculum subserve the college curriculum or the business world? Interstate schoolman, 6: 13-15, February 1908.

638. **Mann, C. R.** Industrial and technical training in the secondary schools and its bearing on college-entrance requirements. School review, 16: 425-38, September 1908.

639. **Twiggs, P. J.** What should be done to encourage college education beyond the commercial course in high schools? *In* National education association. Journal of proceedings and addresses, 1908. p. 891-94. Discussion, p. 894-5.

College entrance credit should be given for the commercial course in high schools.

640. **True, A. C.** What is agriculture—elementary, secondary and collegiate? *In* National education association. Journal of proceedings and addresses, 1908. p. 1202-7.

How much of the subject should be taught in the schools of different grades.

641. **Scott, W. A.** Relation of the commerce course at the university to the high schools. *In* Wisconsin teachers' association. Proceedings, 1908. p. 42-44.

642. **Brooks, S. D.** The relations of the university to the secondary school. *In* National education association. Journal of proceedings and addresses, 1909. p. 192-98. *Also in* Education, 29: 576-84, May 1909.

Recent changes and the tendency toward better preparation for life should lead universities to waive uniformity.

643. **Townsend, E. J.** The status of the high school and its relation to colleges and universities. *In* National education association. Journal of proceedings and addresses, 1909. p. 794-99.

The curriculum should give each boy at every stage of his development a preparation for the maximum efficiency in life, and those studies which contribute to that end should constitute the best preparation for college work.

644. **Springer, D. W.** Should the university place commercial subjects upon the list of electives from which entrance credits may be chosen? *In* Michigan schoolmasters' club. Journal, 1909. p. 159-66.

645. **Burnett, E. A.** The function of the land-grant college in promoting agricultural education in secondary schools. *In* Association of American agricultural colleges and experiment stations. Proceedings, 1909. p. 87-93. Discussion, p. 93-4. (U. S. Experiment stations office. Bulletin no. 228.)

646. **Graham, A. B.** Report of committee on encouraging college entrance credit in high-school agriculture. *In* National education association. Journal of proceedings and addresses, 1910. p. 480-83.

List of colleges classified according to their present attitude on the subject.

647. **Crosby, D. J.** The place of the agricultural high school in the system of public education. *In* National education association. Journal of proceedings and addresses, 1910. p. 1103-7.

Its place is within, not outside of, our system.

648. On to college or into business. *In* Michigan schoolmasters' club. Journal, 1910. p. 70–77.

Papers by N. A. Harvey and — Ferris.

649. **Scott, T. P.** The two-fold function of the high school—preparation for college and for life. *In* Mississippi teachers' association. Proceedings, 1910. p. 64–70.

650. **Thum, William.** Questions for the universities. *In his* Forward step for the democracy of tomorrow. 1910. p. 107–11.

Universities should do more to increase high school attendance and make high school graduates better able to support themselves by letting the high schools offer practical courses.

651. **Babcock, E. B.** Cooperation between the schools and the college of agriculture. California university chronicle, 13: 335–42, July 1911.

Methods used by the University to aid teachers of agriculture in secondary schools.

652. **Robison, C. H.** The attitude of colleges and universities. *In his* Agricultural instruction in the public high schools of the United States. 1911. p. 151–57.

Shows the attitude of leading universities of the upper Mississippi valley and a few others.

653. Shall industrial or vocational subjects be accepted for admission to college? *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1911. p. 49–66.

Papers by J. H. Penniman, showing the present favorable attitude of the colleges, and A. D. Dean, who considers the high school more dependent upon the "demands of a newer civilization" than upon the colleges. Penniman's paper also in American educational review, 33: 289–93, March 1912.

654. **Roberts, G. L.** Vocational guidance. *In* North Central association of colleges and secondary schools. Proceedings, 1911. p. 70–78.

Agriculture in high school and college: high schools are not ready for courses in this subject, and they should not be given until they can be well taught.

655. **Bevier, Isabel.** Home economics in the high school and in the university. *In* North Central association of colleges and secondary schools. Proceedings, 1911. p. 78–85.

A comparison and justification of the study in both places.

656. **Norlin, George.** High school preparation for college. Colorado school journal, 27: 16–19, January 1912.

"A discussion as to whether the so-called cultural subjects should be sacrificed to a course which leads to immediate and lucrative efficiency in our commercial and industrial life."

657. **National education association.** Report of the committee on college-entrance requirements. *In its* Journal of proceedings and addresses, 1912. p. 915–18.

In the department of manual training and art.

658. **Kingsbury, J. T.** How much of the industrial and commercial subjects should be allowed towards entrance requirements to college? *In* National association of state universities. Transactions and proceedings, 1912. p. 364–83.

Gives the opinions of the presidents of state universities in regard to the recommendations of the N. E. A. committee on this point.

659. **Crawshaw, F. D.** College entrance and advanced credits for manual arts. School review, 21: 467–74, September 1913.

Writer thinks that administrative officers "must encourage the election of vocational subjects by high school students who are preparing for college."

660. **Lane, C. H.** The agricultural college in its relation to the public schools. High school quarterly, 2: 20–22, October 1913.

IX. PROFESSIONAL TRAINING.

661. **Collin, C. A.** Should professional schools admit on lower requirements than colleges? *In* New York (State). University. University convocation. Proceedings, 1893. p. 450–55. Discussion, p. 455–64. (Regents' bulletin no. 22.) *Also in its* Annual report of the Regents, 1893. v. 1, p. 450–64.

662. **Walker, F. A.** The relation of professional and technical to general education. Educational review, 8: 417–33, December 1894.

Criticizes the schools and colleges for lack of purely disciplinary training.

663. **Nightingale, A. F.** The tendency of students to omit the college course that they may enter professional schools direct from the secondary schools. School review, 5: 73–83, February 1897.

Author thinks the entrance to the professional schools is too easy.

664. **Thurston, R. H.** Professional and academic schools: their plans, courses, and preparation. *In* Association of colleges and preparatory schools of the Middle states and Maryland. Proceedings, 1898. p. 36–56. Discussion, p. 57–106. (New York (State). University. Regents' bulletin no. 47.) *In condensed form also in* Educational review, 17: 16–36, January 1899.

Discussion of the report of the committee on entrance requirements of engineering colleges, presented at Buffalo, August 1896.

665. **Benedict, A. L.** The preparatory education of medical students. School review, 7: 18–23, January 1899.

Outline of schedule including preparatory medical studies in a high school curriculum.

666. **Beal, J. H.** What secondary subjects are most valuable for a professional life? *In* New York (State). University. University convocation. Proceedings, 1900. p. 350–58. (Regents' bulletin no. 51.) *Also in its* Annual report of the Regents, 1900. p. 350–58.

667. **Rebec, George.** Preparation for life and preparation for college. *In* Michigan schoolmasters' club. Journal, 1902. p. 1–8.

Professional studies have a place only as they are reconcilable with the more vital concern of culture.

668. **Richards, H. S.** Entrance requirements for law schools. *In* American bar association. Transactions, 1903. p. 581–91.

669. **Polk, W. M.** Secondary subjects essential to professional students. *In* New York (State). University. University convocation. Proceedings, 1904. p. 287–90. Discussion, p. 290–93. (Regents' bulletin no. 64.)

670. **Mercer, W. F.** What can the college and the fitting school do to aid in the study of medicine. *In* American academy of medicine. Bulletin, 9: 93–107, April 1908.

671. **Kelsey, F. W.** Greek in the high school, and the question of the supply of candidates for the ministry. School review, 16: 561–79, November 1908. *Also in* Michigan university bulletin. Supplement, 1908, 9: 28–46.

Greek should be introduced more generally.

672. **Wigmore, J. H.,** *and* **Crossley, F. B.** A statistical comparison of college and high school education as a preparation for legal scholarship. *In* Association of American law schools. Proceedings, 1909. p. 112–36. tables.

673. **Flexner, Abraham.** The College association standard. *In* Association of American medical colleges. Proceedings, 1910. p. 75–84.

Medical colleges in the Association should enforce the requirement of an actual four-year high school education.

674. **MacLean, G. E.** Entrance requirements for admission to the medical course. *In* Association of American medical colleges. Proceedings, 1911. p. 17–22. Discussion, p. 22–28.

675. **Swartzel, K. D.** Some administrative phases of entrance requirements. *In* American medical association bulletin, 7: 190–98, March 15, 1912.

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MUSIC IN THE PUBLIC SCHOOLS

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PUBLIC SCHOOLS

DEPARTMENT OF THE INTERIOR

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, January 12, 1914.

Sir: That music plays an important part in the life of a people and should therefore have an important place in the system of education in any State or nation has been understood by the foremost educators for three thousand years. Among a practical, industrial, and commercial people, like ourselves, good music is necessary not only for enjoyment and recreation, but also for inspiration and for salvation from death in the din and dust of trade; and this music should be democratic in the truest and best sense. This it can never be until it becomes an integral part of the education given in the schools of all grades, as it is in the schools of some other countries. It is through an increasingly clear understanding of this fact that music, not recognized in the course of study of our earliest public schools, has, within the last twenty-five or thirty years, been introduced to some extent into the schools of most progressive cities and of many towns, villages, and country communities, though by many it is still considered unessential and a fad. Sooner or later we shall not only recognize the culture value of music, we shall also begin to understand that, after the beginnings of reading, writing, arithmetic, and geometry, music has greater practical value than any other subject taught in the schools.

Finding that no comprehensive report of the extent to which music is taught in the schools of the several States and of the methods used in teaching had ever been made, I requested Mr. Will Earhart, formerly supervisor of music in the schools of Richmond, Ind., now director of music in the schools of Pittsburgh, Pa., to make a thorough investigation of the subject for this bureau. The manuscript herewith transmitted embodies the results of this study, giving, with little comment, a comprehensive account of the present status of music teaching in the public schools of the United States. I recommend that it be published as a bulletin of the Bureau of Education. It is expected that this will be followed by studies of music in the schools of other countries and by a constructive study of the means for making music teaching more effective in the schools of the United States.

Respectfully submitted.

P. P. Claxton,
Commissioner.

To the Secretary of the Interior.

MUSIC IN THE PUBLIC SCHOOLS.

MUSIC IN ALL GRADES BELOW THE HIGH SCHOOL.

In conducting this investigation the following questionnaire was used:

QUESTIONNAIRE FOR GRADES BELOW HIGH SCHOOLS.

1. Is music required?..
2. How many minutes per week are given to it in each grade?..........................
3. Is the course graded?..
4. Give titles and authors of textbooks used in each grade..........................
5. Do you give particular attention to voice building?..........................
    How is this done?..
6. Features of practice, by grades:
    Rote singing: Grades..
    Staff notation and sight singing: Grades..
    Individual singing: Grades..
    Vocal drill: Grades..
    Ear training: Grades..
    Dictation: Grades..
    Written work: Grades..
    Sight reading, using syllables: Grades..
    Singing words at sight: Grades..
    Two-part singing: Grades..
    Three-part singing: Grades..
7. Are the pupils "marked" in music?..
    If so, are the marks considered in their class standing?..........................
8. What are the steps in your method of teaching children in primary grades to sing by note?..
9. What percentage of the pupils in the grammar grades can sing an ordinary hymn tune at sight?..
10. For what parts is the music used in the eighth grade written?..........................
11. How do you manage boys' voices during the time of change of voice?...........
12. What is the total number of rooms included in your answers?..........................
13. In how many of these is there a piano?.......... An organ?..........................
14. (*a*) Does a special teacher of music give all the lessons?...... or (*b*) do the grade teachers give all of the lessons, without special departmental supervision?...... or (*c*) do the grade teachers carry on the work under the direction of a supervisor of music?..
15. How often does the supervisor visit each room?..........................
16. Are prospective grade teachers required to pass an examination in music?......
    If so, who prepares the questions?..
17. In what branches is the special teacher or supervisor of music required to pass an examination?..

Before presenting tables and analyses of the replies received, some explanatory comment should be made.

It became evident early in the tabulation that there was great diversity of theory and practice in public-school music teaching, and that this diversity made some of the questions propounded hold little significance in some quarters, while they were quite appropriate and were, therefore, categorically answered in others.

Let us take for instance the question of "Features of practice, by grades" (No. 6). A study of the table with relation to the total number of answers given to the first question, "Is music required," reveals that rote singing is known and its practice quite well systematized in 606 out of the total number of schools (622) that report music as a required branch, the 16 remaining schools being accounted for as dismissed because of inept answers.

The study of staff notation and sight singing is likewise seen to be a standard feature of practice intelligently reported as to the grades in which it is introduced, and so well recognized as essential that many schools reporting music as not required still give testimony that such study is carefully organized by grades in their own work. On the other hand, the inquiries as to vocal drill and dictation brought forth a smaller series of answers. This is partly accounted for by the fact that the largest number of answers tabulated for any one grade is not representative of the number of schools that have such a feature in some grade or other. Thus 462 schools report dictation in fifth grade and 454 report it in fourth grade, but the practice is not at all standardized, and many of the 454 are quite likely to be schools that are not included in the 462, being, rather, schools that for some reason abandon dictation with the fourth year. The entire comparative shortcoming is not accounted for in this way, because a study of the papers themselves reveals that many who report on other items omit all answer to these features and that a few frankly write interrogation marks in the place for the answers.

The conclusion should, therefore, be borne in mind that although 681 papers were examined, and all were read for every question, for hardly a single question does the maximum number of answers tabulated equal the number of papers read; nor is it the same as the number of answers for any other question; that this disparity is at times apparent rather than real, and arises from a different basis in answering; and that, when real, it arises from failure to answer, indefiniteness of answer, or waiving of the answer because of the inapplicability of the question, as when questions concerning eighth-grade music are presented to schools that have no music above the sixth grade. The variety of these singular conditions seems to be endless, in matters of small detail, and the greatest difficulty in tabulation arose from this cause. Indeed, for some phases of our inquiry, it seemed that a table which would accurately classify all varieties of practice would require as many groupings as there were schools reporting, each school being in a class by itself. For these phases a broad basis of tabulation that would recognize fundamental differences only was adopted. Failure to answer, or indefiniteness in answering, was, in the end, accepted as final, because almost every paper received had some such failure, and to correct this would have meant the return of the paper and endless delay; and, on the other hand, no one question failed of definite answer on a large percentage of the papers, and the showing of this large number could, it was believed, be taken as representative. This belief grew to stalwart proportions as each fresh hundred of papers examined failed to change appreciably the averages and percentages revealed by the first hundred; till now it is reasonably certain that a comprehensive report for the United States would not change seriously the balance of values that are found in these present tables. Any possible exception to this assumed reliability, however slight or partial it may be, will be noted in the comment that will be made upon the separate tables. With so much of preliminary explanation, these tables may now be interpreted.

QUESTIONS AND ANSWERS.

(1) Is music required? ...... and (3) Is the course graded? .....

In all, 681 towns and cities (school systems) returned tabulable answers. These towns and cities have here been classified as to population (census of 1910) as follows: Class A, population 4,000 to 10,000; class B, 10,000 to 25,000; class C, 25,000 to 50,000; class D, 50,000 or more.

The number of schools[1] of each class answering affirmatively or negatively to both questions is shown in the following table:

Table 1.—*Number of school systems reporting on questions 1 and 3, by population.*

Classes.	Music required.	Not required.	Course graded.	Not graded.
	Schools.	*Schools.*	*Schools.*	*Schools.*
Class A	285	44	[2] 280	4
Class B	185	10	185	....
Class C	82	3	82	....
Class D	70	2	70	....
Total	[3] 622	59	617	4

---

[1] "School" throughout is used to designate an entire town or city system of schools.

[2] In addition to the 280 schools reporting under class A, that this course is graded, 1 school reports the course as "poorly graded."

[3] Percentage requiring music, 91.

(2) How many minutes per week are given to it in each grade?

TABLE 2.—*Number of schools reporting on minutes per week, by grades.*

[No classification as to population is made in this table.]

Minutes per week.	Grades.							
	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eighth.
0	0	0	0	0	0	0	1	2
15	14	15	7	6	4	4	4	4
20	12	14	20	20	18	15	12	11
25	5	4	4	5	5	7	11	11
30	12	10	7	8	12	13	13	13
35	1	1	1	1	0	0	1	1
40	15	17	16	17	13	11	10	10
45	10	10	7	6	4	4	5	6
50	28	26	23	20	16	14	15	16
55	2	2	1	0	0	1	0	0
60	133	132	138	139	128	140	140	139
65	0	1	1	1	1	2	1	1
70	4	4	4	6	8	10	9	7
75	171	170	156	145	122	114	107	104
80	24	24	26	28	23	21	28	28
85	0	0	1	1	3	2	2	1
90	32	34	35	34	50	55	59	57
95	3	3	2	2	2	1	1	1
100	128	120	131	133	161	158	133	131
110	4	4	6	4	4	4	4	3
115	2	2	2	2	2	2	2	2
120	9	8	7	11	12	13	15	20
125	6	6	9	11	12	10	18	16
130	1	1	1	1	1	0	0	0
140	0	0	0	0	0	0	3	0
150	4	10	10	11	13	14	22	22
Total	620	618	615	612	615	615	616	606

It is clear from a study of the table that the arithmetic of the school day or week operates in fixing the proportion of time given to music. The favored periods are 60 minutes, 75 minutes, and 100 minutes. The first probably means four 15-minute periods or, in higher grades, three 20-minute or two 30-minute periods; 75 minutes means five 15-minute periods or three 25-minute periods; 100 minutes means five 20-minute periods. In short, multiples of 5 (the number of days in the week) or of 10, 15, 20, 25, and 30 (convenient lesson lengths for various grades) are chiefly favored, with 75 minutes leading for the first four grades (five 15-minute lessons) and 60 and 100 minutes leading for upper grades and implying fewer lessons per week, but of greater length.

(4) Give titles and authors of textbooks used in each grade.

(6) Features of practice by grades: Rote singing; staff notation and sight singing.

(8) What are the steps in your method of teaching children in primary grades to sing by note?

The "song-study" or the "scale" method.—The attempt to ascertain the growth of the "song-study" or "observation" method, which is of later origin than the "scale" method, so called, involved the consideration jointly of the replies to the three inquiries given above.

The answers to all these were considered together, and the school under investigation was then classified as accurately as the nature of the replies permitted. Absolute accuracy, it was found, could not be obtained, owing, first, to a startling lack of any clearly conceived methods in a great many schools; secondly, to a great variety of more or less judicious fusions of method; thirdly, to some meager or even contradictory replies. It might be thought that the method avowed and followed in the textbooks used would give sufficient basis for classification, but in a multitude of schools the texts were administered in a manner quite foreign to their intention. The replies were most disheartening, because of the revelation they brought of a deplorable lack of pedagogical training and understanding. It is not that faulty methods were revealed, for it is not the intention here to imply that any well-considered and well-administered method is wrong; but the absence of any method, the lack of any known reason for the features of practice adopted, with the implication this carries of wasted hours, injudicious and untimely effort, uncertain and wavering procedure—this is lamentable.

In view of this condition, the suggestion is here made that supervisors of music be required by school authorities to show an amount of normal professional training equal at least to that required of the grade teacher. This should include a study of standard music courses from the standpoint of psychology and pedagogy, instead of considering them solely as to practice, which is the present fashion in normal courses. Also the Music Supervisors' National Conference, the department of music of the National Education Association, and the public-school music department of the Music Teachers' National Association would make a valuable contribution to school music and to all musical education if they would appoint committees to formulate statements of the ideals, principles, and features of practice appropriate to the several courses, to the end that supervisors could choose wisely one path or another, and then within that path could adopt methods of procedure that would be consonant with the ideals of the course and, therefore, be efficient and successful.

In general the reporting schools were classified by the method presented in the textbooks used, unless, as often happened, this was contradicted by other testimony. One standard course that is put forth as avowedly a conservative course, occupying middle ground, was yet classified, rightly or wrongly, as "scale" method, unless the other method was clearly reported, inasmuch as the greater number of correlated answers were found to reveal the scale method as the usual mode of treatment in connection with this text. The result of this classification was as follows: Song-study method, 260 school systems; scale method, 336 school systems; total, 596.

(5) Do you give particular attention to voice building? ...... How is this done?

As all specific vocal drill is tabulated under the next series of queries, and as the second part of this present question does not permit of a categorical answer, a statistical record of the answers was not made. It is a pleasure to state, however, that almost every school reported affirmatively as to the first part of the query. The only divergence was with regard to the voice building being done incidentally or by special practices. A gratifyingly large number reported that the result was gained incidentally "by light, soft singing," "by constant use of the light, head voice"—such answers as these being frequent and typical. No feature of school practice shows more intelligent and careful treatment than this, and few questions elicited such interested and sympathetic replies.

(6) Features of practice, by grades.

The fact that certain possible features were here stated and inquired after seems to have constituted, to many who reported, a recommendation of these features as being quite desirable. Such an implication was not intended, and, being assumed,it has led to a somewhat larger showing than is normal. For instance, a number of schools that reported only "use of the light, head voice" under question 5, now answer the query as to vocal drill by stating that they practice it in all grades.

Here the thought of incidental care of the voice is evidently extended to embrace the suggestion of vocal drill, though this latter term very clearly implies a special formal practice. Similarly, written work is likely to be claimed for all grades by schools that state that they do not introduce staff notation until the second or third grade; and there are other discrepancies, all tending to inflate the record of these special practices, such as cautious statements of "a very little in all grades," which statement, though doubtful, is a record necessarily classified in the affirmative column. One modifying thought must, therefore, be borne in mind while scanning these tables—that the practices are observed, as stated, in the given number of schools, but not by any means as separate and highly organized divisions of the school music course. This would imply a faulty system and an amount of time that it is impossible to obtain in almost any system. The real plan of administration is, therefore, much more unified and much more nicely proportioned than the records of these numerous activities might lead the student to expect.

TABLE 3.—*Schools reporting on features of practice, by grades.*

	Grade.								
	None.	First.	Second.	Third.	Fourth.	Fifth.	Sixth.	Seventh.	Eigh
	Schools.	*Schools.*	*Schools.*	*Schools.*	*Schools.*	*Schools.*	*Schools.*	*Schools.*	*Schools.*
Rote singing extends only through	1	18	125	207	142	39	16	3	55
Staff notation and sight singing begun	....	277	229	84	30	16	6	3	1
Individual singing	3	485	513	528	512	452	379	307	286
Vocal drill	14	433	457	455	492	479	479	460	443
Ear training	13	494	517	524	523	497	473	439	424
Dictation	23	254	339	414	454	462	450	419	395
Written work	27	150	289	414	478	500	505	481	459
Sight reading, using syllables, extends only through	3	0	0	1	0	5	13	38	498
Words at sight begun	71	32	66	64	53	55	76	68	41
Two-part singing begun	3	3	28	167	271	91	18	4	2
Three-part singing begun	23	....	....	....	10	96	276	145	28

Several interesting features in this table are worthy of consideration. The practice of rote singing extended through the grades appears to be well standardized. It is, in fact, better standardized than the figures indicate, for there is incidental evidence on the papers that some understood the inquiry (as was intended) to apply to rote singing only as a regular and integral feature of practice, while others reported its presence in grades where it is only occasional and irregular. There is, however, marked concurrence in abandoning rote singing as an essential feature in third grade, the sharp advance over the numbers doing this in second grade, and the sharp decline in numbers holding rote singing over to the fourth grade being very significant. The increase noted in the eighth grade is unfortunate. It is one of many indications met with that eighth-grade music is weak in comparison with the work in lower grades and does not carry the progress begun below to its proper fulfillment. It is disheartening, indeed, to find a considerable number of schools reporting "no music in the eighth grade," and many other schools give testimony that the work of this grade is little more than some poorly administered assembly singing by rote.

Staff notation and sight singing begun.—Contrary to expectation, the first grade shows the largest returns for this feature. However, the answers to the eighth question prove that the staff work in first grade is quite commonly of the "observation" type; that is, consists in observing the staff representation of songs or melodic figures previously learned by rote rather than in calculating a way into new and unheard songs by reckoning up and down the staff. "From ear to eye"; "writing songs on board"; "notes to songs taught by rote"; "visualizing on staff of songs committed"; "familiar melody by rote, then by note"—these answers are taken from the first 15 papers picked up at random, and are typical of scores of others.

Individual singing.—In addition to the numbers given in the table, eight schools reported "very little," without reference to specific grades.

The practice is seen to reach its maximum in the third grade. Probably all teachers, even those who abandon individual singing in this grade, will agree that it is desirable, even though it is somewhat more difficult, to maintain the practice equally generally in the fourth, fifth, and sixth grades. The decline in the seventh and eighth grades is to be expected, both on account of the diversity of voices in these grades and the consequent difficulty of quick treatment and on account of the new and more mature ways of approaching musical practice. The total of schools reporting is not ascertainable from the table, since the number having individual singing in any grade whatever is not specially computed.

Vocal drill.—In addition to the numbers given in the table, three schools answer, in a general way, "Some."

As with "individual singing," the total number of schools having any vocal drill is not recorded. Also there is intrinsic evidence showing that the vocal drill reported is often not formal vocal drill, but rather consists of indirect methods of voice conservation. This is probably a much better practice in the opinion of most supervisors.

The practice, whichever form it assumes, is well organized in point of the number observing it and the uniform continuation of it throughout the grades. This means at least general and persistent attention to vocal habits.

Ear training.—Two schools in addition to those included in the table answer "Some," with no grades specified.

The answers imply diverse conceptions of ear training with reference to its being a formal, separate practice or, rather, a mere incidental acuteness of attention in the general music work. A large number of answers certainly imply only this aural attention, stimulated or developed by no special system of exercises. This will probably not be regarded as unfortunate by the greater number of supervisors, except where it implies no attention to dictation work. This latter is so generally recognized as the best form of ear training, and covers this ground so well, that one wonders how it happens that the numbers reporting it fall so far short of the numbers reporting ear training. The unavoidable inference is that the ear training reported in excess of dictation is but an incomplete form of dictation, not developed formally to an extent that justifies its inclusion under the stronger term.

The degree of persistence shown through all the grades is a commendable feature.

Dictation.—One school, not included in the table, answers "Some," without reference to grades.

A larger number of schools answered vaguely to this than to any other query as to the features of practice here investigated. This is corroborative evidence that the ear training in many systems has not developed to the extent of becoming special and formal, for in that case it would be dictation work. A series of large numbers with reference to dictation, and a decrease, in inverse ratio, in the numbers reporting under ear training, would represent a sounder method.

Written work.—Again, two schools answer "Some." The sudden increase in third grade is proper and quite to be expected. The number in first grade, unless some rudimentary blackboard work is all that is implied, is doubtless too large.

As illustrative of the difficulty in including all answers, it may be mentioned that one school (for obvious reasons not figured in the table) reported, "Staff introduced in second grade," and later, "Written work in all grades."

Sight reading, using syllables extends only through.—The overwhelming burden of testimony is in favor of retention of syllables throughout the eight grades. This is interesting in view of the fact that a number of supervisors have at various times endeavored to abandon the syllables earlier.

"Eighth grade" is here used to include the highest grade below the high school, which in many cities, especially in those in Massachusetts, is a ninth grade. This usage is followed also in the other features of practice; it was made possible by the fact that no instance was found of a school reporting a practice in eighth grade that was not also continued in ninth grade.

Besides the total of schools reported in the table, the following special cases should be noted: Two schools use only "la" or "loo" ("neutral" syllables); two schools use number names instead of syllables; two schools report syllables through seventh grade only, but with no music taught beyond. One school reports syllables through sixth grade only, and one school reports syllables through fifth grade only, but in each case with no music taught beyond.

Words at sight begun.—This record is remarkable for lack of uniformity in practice. Beginning with the third grade there is manifestly no agreement as to the proper time to begin the use of words at sight, save for the indication that eighth grade is considered a little late. Part of this disagreement may be only apparent, since some doubtless reported on the grade where the earliest tentative efforts were made, while others may have reported the practice only in that grade in which they made it a regular and insistent feature. But making allowance for this divergence, it still is evident that pedagogical convictions with regard to this point are not yet firmly established.

Two-part singing begun.—This table reveals a very satisfactory degree of uniformity, the third year (probably often the latter part of the year only) or the fourth being generally recognized as the proper time for beginning part singing.

Three-part singing begun.—The agreement here is still more marked, and, in fact, is so great as to justify a statement that the supervisors of music in the United States quite generally recognize the sixth grade as the time for beginning three-part singing.

(7) Are the pupils marked in music? If so, are the marks considered in their class standing?

TABLE 4.—*Marking of pupils.*

Schools reporting.	Schools.	Percentage.
Schools reporting pupils marked	519	85.9
Schools reporting pupils not marked	85	14.0
Total	604	99.9

The 519 schools reporting the pupils "marked" respond to the second half of the question as follows:

Consideration of marks.	Schools.	Percentage.
Marks considered in class standing	344	66.2
Marks not considered in class standing	136	26.2
Marks not vitally considered in class standing	38	7.3
Not answered	1	.1
Total	519	99.8

"Not vitally" is the exact wording of one or two replies. "Yes, but deficiency in music does not prevent promotion;" "Pupil is not kept back if he tries;" "Not required as a promotion subject;" "Pupils as a rule are not retained if they fail only in music;" "They count in the general average;" "No; except for honor roll"—these are samples of other replies classified under the group characterized by the words "not vitally considered."

Of the 604 schools, 382 (344 and 38), or 63.2 per cent, consider to some extent the marks given in music in relation to the pupil's general class standing, while 222 (85 + 136 + 1), or 36.7 per cent, do not have music marks so considered.

(8) What are the steps in your method of teaching children in primary grades to sing by note?

The answers to this question could not be statistically tabulated, and no separate table was attempted. They were, however, included in the reckoning of "song-study" or "scale" method presented earlier in this report. The statements there made, that there is much confusion as to method and aimlessness as to practice, are confirmed by a fresh reading of the wording of the replies. In many of these unfortunate schools there is apparently no settled conviction as to what result should be striven for; and where there is apparently such conviction, the practices followed are often lacking in relevancy with regard to this result. Such indefiniteness is of course due to the advent of the later "song-study" method, and is as Dr. S. S. Myers, of Tiffin, Ohio, recently said, in an address before the Ohio State Teachers' Association, "a strange admixture of both the old and the new—a blind groping, as it were, after something better, with apparent inability to grasp fully the new idea or wholly relinquish the old."

(9) What percentage of the pupils in the grammar grades can sing an ordinary hymn tune at sight?

There was marked reluctance to answer this question, only 433 schools out of 599 presumptively included being willing to hazard any reply. A second notable feature is the diversity revealed in the replies, which range from 0 to 100 per cent in a series that is strikingly irregular except for the favor shown familiar fractions and a general preference for the higher ratings. Both of these irregularities are quite natural and easily explicable. No definition of what constituted singing at sight was given, and there were doubtless many standards employed. Thus, some probably limited the application of the question to individual singing of a harmonic part, such as alto or bass, without accompaniment and possibly using words at sight. From this most exacting standard the interpretation of the question probably ranged to the inclusion in the sight-reading group of all those who might be able to take part in ensemble singing of a hymn with piano or other lead, and on either the melody or a lower part, without manifest inability to remain within the limits of general consonance. Diversity of attainment in the different schools of a large city system also often prevented an exact answer. Finally, without a standard being set and without a laborious individual examination, no great accuracy was possible, except in the case of those few schools that maintain rigid individual requirements. That there is great diversity in results and in standards, but also a generally optimistic outlook, is the most that can be claimed for the showing made by the table.

TABLE 5.—*Percentage of pupils in grammar grades able to sing hymn tunes at sight.*

Percentage.	Schools reporting.	Percentage.	Schools reporting.	Percentage.	Schools reporting.
0	6	33.3	3	70	14
1	1	35	1	75	119
3	1	40	8	80	40
5	9	45	1	85	16
10	24	50	60	90	35
15	1	55	4	95	10
20	6	60	24	98	1
25	14	65	13	99.9	1
30	11	67	4	100	6

(10) For what parts is the music used in eighth grade written?

This question was designed to obtain information as to the use of the bass clef and the recognition given in the material used to the nature and capacities of the changing voices of the boys. The matter is believed to be one of very great importance. If the bass clef is not used, it is almost certain that the more mature boys lack a part that in range, quietness of progression, and harmonic bearing is appropriate to their voices and consonant with their capacities and tastes at the time. It is a question whether the class disorganization often found in eighth-grade music does not arise largely from just this cause. Yet three-part songs for treble voices are often carried into the eighth grade, though such part songs have now advanced to a high degree of complexity, and imply, by the range, independence, and agility of movement in their parts, the perfection of treble-voice singing rather than the humble beginnings of bass-voice work. The third part, too, to which the basses, in such case, are usually assigned, is constantly standing, even in the final tonic chord, and because of the limitations of treble-voice range, on the third of the chord; and a bass singing this an octave lower becomes dimly conscious of some rudimentary abnormality which he has the greatest disinclination to participate in. In short, being a bass, he should have a bass part to sing; and publishers and supervisors should strive to furnish more music in which the treble voices will be as well provided for as they would be otherwise, while the basses in addition will have appropriate and encouraging parts.

Further technical advancement, as regards rhythmic difficulties, chromatics, and modulations, could well be laid aside at this juncture for the sake of establishing firm mixed-voice part singing and giving the basses proper vocal care. Indeed, the technical study in well-administered systems is completed before the eighth year, and the proper gradation, which is toward more mature thought and mood, rather than toward greater technical complication, is observed in such schools. First steps toward mixed-voice chorus singing, using material adapted to the dawning maturity of the students, is the plan of work in the more successful systems. The table which follows, although not altogether auspicious, shows a happy preponderance of good usage:

TABLE 6.—*Bass clef and voice classifications in eighth grade.*

	Schools.
Bass clef not used	126
Bass probably with two or three treble parts or alto-tenor	347
Four-part, mixed voices	93
Soprano only	1
No music in eighth grade	4

(11) How do you manage boys' voices during the time of change of voice?

The answers, though divided into the five classes given below, may be said to have fallen into two groups: First, a large group, the first three classes given, characterized by more or less uncertainty of belief and weakness in the technic of managing changing voices; and second, a smaller group (the last two classes given) characterized by definite aim and efficient method, whatever may be thought of the comparative merits of the two methods pursued by the classes in the group. This division into two groups may appear to be arbitrary and hasty in the light of the headings given in the table; but the text of the replies was carefully weighed before the schools were classified, and few schools reporting under any one of the first three headings gave evidence of having anything more than a negative or passive plan. Safety is sought by asking the boys to sing softly, or to sing very lightly when they wish to sing at all. Again, escape from the responsibility of discovering what every boy can and should do is sought by herding all the boys with changing voices into some one lower part, usually alto-tenor—which, of course, must be utterly bad for many of them. These plans are too loose and general, and seem to be makeshifts rather than methods conscientiously adopted.

On the other hand, a smaller number of replies give evidence of very careful plans most skillfully and faithfully carried out, as follows:

TABLE 7.—*Management of changing voices.*

	Schools.
No answer or indefinite	60
Singing softly (ad libitum) till period is tided over	226
A general "blanket" assignment given them, as alto-tenor	109
Singing stopped because considered injurious	111
Careful individual and general direction and supervision given	88

(12) What is the total number of rooms included in your answer?

(13) In how many of these is there a piano?...... An organ?......

Question 12 was preparatory to question 13. The answers were gratifying to an unexpected degree. They are not absolutely conclusive, as some of those answering doubtless interpreted the question strictly and did not account for pianos in corridors, while others did count these as equivalent to at least one room. Again, kindergartens are sometimes included, sometimes not; and whether they are or are not, is often not stated. It will be noted that a separate entry is made of a large number of rooms that are served in common by pianos that are at the disposal of groups of rooms, but how many more of these there may be that were not reported can only be conjectured. The table, therefore, favorable as the showing is, gives estimates that are probably lower than the facts would justify.

Pianos.—It appears that 42,644 rooms, to which must be added the number of rooms (not reported) in Roanoke, Va., Providence, R. I., New Britain, Conn., and Akron, Ohio, have 4,061 pianos. This is something over 9.5 per cent, but Roanoke and Providence report no pianos in rooms, and their figures, if available, would therefore tend to lessen the percentage. But this decrease would be very small, and against it must be counted a number of instruments not reported, which serve each of a group of rooms occasionally. Thus considered, it is probable that 10 per cent of the schoolrooms reported have pianos available for their lessons.

We find that 12,226 rooms, plus the number of rooms (not reported) in Chattanooga, Tenn., and Charleston, S. C., have one to three pianos in each school building, or a piano in a music room, or pianos for eighth grades, or for assembly halls. Charleston reports a piano in each music room and a departmental plan.

The following cities (included above) are worthy of note:

Cities reporting rooms and pianos.

Cities.	Rooms.	Pianos.
Cincinnati, Ohio	1,000	250
Ithaca, N. Y	44	22
Minneapolis, Minn	900	100
Rochester, N. Y	800	100
St. Louis, Mo	2,194	700

Boston (not included in tables) reports 2,000 rooms and pianos "in primary classrooms only." New York City, 16,000 rooms, reports under pianos, "practically none."

Organs.—The statistics show that 56,505 rooms, plus the number (not given) in Akron, Ohio, Roanoke, Va., Chattanooga, Tenn., Providence, R. I., and New Britain, Conn., have 1,769 organs.

Pittsburgh, Pa., 1,500 rooms, reports 20 stationary and 127 portable organs, the latter serving the great majority of all the rooms in daily lessons. Another school of 40 rooms likewise reports portable organs so used.

A piano or an organ in a schoolroom adds to the musical experience and progress just what it would add in a home or in a studio, as compared with these places without any instrument. Not only is the musical experience broadened and the schoolroom atmosphere enriched, but technical progress is furthered. In ear training a sharp definition of pitch and a steady production of tone that can not be hoped for from most voices is, with instruments, made possible. Chromatics, scale formation, and part singing can also be better taught by the use of keyboard instruments. It is not an unimportant matter, therefore, that so many schoolrooms are equipped with them.

(14) (a) Does a special teacher of music give all the lessons? ...... or (b) do the grade teachers give all the lessons without special departmental supervision? ...... or (c) do the grade teachers carry on the work under the direction of a supervisor of music?

The table shows the supervisory plan to be practically universal.

Table 8.—*Departmental plan of singing lessons.*

	Schools.
Special teacher (supervisor) gives all the lessons	35
Grade teachers give all lessons, with no special departmental supervision	15
Grade teachers give lessons under instruction of a supervisor	558
Superintendent gives lessons	1

Cincinnati reports all three conditions. One school reports first plan (*a*) above for seventh and eighth grades.

(15) How often does the supervisor of music visit each room?

Table 9.—*Visits of supervisor to rooms.*

Number of visits.	Schools.	Number of visits.	Schools.
Days per week:		Once in—	
Five	1	Two weeks	128
Four	1	Three weeks	39
Three	12	A month	41
Two	48	Five weeks	5
One	264	Six weeks	9
Alternate days	4	Eight weeks	4
Once in—		Times per year—	
Three days	2	Six (Salt Lake City)	1
Six days	3	Four (Trenton, N. J.)	1
Seven days	1	Three (Indianapolis, Ind.)	1
Eight days	1	Twice (Baltimore, Md., and Seattle, Wash.)	2
Six times per month	2		
Three times per month	2		
Twice in three weeks	1		

In addition to these cities, Atlanta, Ga., reports schools for white children visited each seven or eight days; schools for negroes, once in six weeks. One school reports grades 1 to 6 visited every other week; grades 7 to 9, visited two days per week.

(16) Are prospective grade teachers required to pass an examination in music? ...... If so, who prepares the questions? ......

Table 10.—*Examination of teachers.*

	Schools.
Teachers examined	181
Teachers not examined	368
Teachers not always examined	8
Questions prepared by—	
State or county board	43
City examining board	18
Supervisor or director of music	60
Superintendent of schools	28

By Table 8 it is seen that grade teachers in the vast majority of schools do the direct teaching under the guidance of a supervisor, but by the first part of this table it is seen that no preparation for this work is required in a large majority of school systems. The inconsistency and weakness of this is obvious.

It will be noted that 32 of the 181 schools reporting that teachers are examined do not reply as to the source of the questions given. Probably there is no fixed rule in these cases. Examinations are often held during the summer months when the schools are disorganized, and any recognized set of questions might in such cases be used.

(17) In what branches is the special teacher or supervisor of music required to pass an examination?

This question will be met with again in that section of this report entitled "Music in State school systems." It is sufficient to say here, with regard to examinations and all other practices looking to ascertaining the competency of public-school music teachers and to issuing them licenses to teach, that there is extreme diversity and confusion, as well as considerable weakness.

As a specialist the supervisor should give evidence of possessing a high degree of special knowledge; as a teacher and director of teachers he should give evidence of possessing a pedagogical knowledge at least equal to that required of the grade teachers whom he is chosen to direct. Yet often the manner of certification leaves one or the other of these capacities open to grave doubt, and sometimes neither is conclusively ascertained.

Conscientious judgment of each individual applicant by local authorities, enlightened as this judgment is by the general increase of knowledge and guided as it is by the advancement made in standards of teaching, alone protects the situation from great weakness. It is not too much to ask, however, that such individual judgment be safeguarded by State regulations that shall insure at least the major requirements for successful supervising.

TABLE 11.—*Examination of supervisors.*

	Schools.
Supervisors examined in—	
Music	120
Music and pedagogy	95
Music and common branches	27
Regular branches and not in music	12
Vocal music	2
Supervisors not always examined	1
Supervisors not examined in any subject	152
Supervisors take same examinations as grade teachers	4

The following indirect answers were recorded:

	Schools.
State license qualifies	5
Adequate preparation (such as graduation from conservatory of music) qualifies.	3
Normal-school training decides	14
State requirements sufficient[1]	33
Training in special or normal schools	18
Preparation in recognized school of music	28

The schools of Dunmore, Pa., were, we have been told, reported by the Mosely Commission as having the best singing the members of the commission heard in any school in America. In this light the report of music in the grade schools of Dunmore is of prime interest. It is given verbatim, the answers being in italic.

MUSIC IN ALL GRADES BELOW THE HIGH SCHOOL, DUNMORE, PA.

1. Is music required? *Yes.*
2. How many minutes per week are given to it in each grade? *About 150 in lower; 100 in upper.*
3. Is the course graded? *Yes.*
4. Give titles and authors of textbooks used in each grade. *Harmonic Reader by Ripley and Tapper, Sight Singing Melodies (Newton).*
5. Do you give particular attention to voice building? *Yes.*
   How is this done? *By watching voice quality in drills and all other exercises.*
6. *Features of practice, by grades:*
   Rote singing: Grades *1, 2.*
   Staff notation and sight singing: Grades *2, 3, 4, 5, 6.*
   Individual singing: Grades *2, 3, 4, 5, 6, 7.*
   Vocal drill: *All grades.*
   Ear training: Grades *3, 4, 5, 6, 7.*
   Dictation: Grades *3, 4, 5, 6, 7, 8.*
   Written work: Grades *3, 4, 5, 6, 7.*
   Sight reading, using syllables: Grades *2, 3, 4, 5, 6, 7, 8.*
   Singing words at sight: Grades *8.*
   Two-part singing: Grades *3, 4, 5, 6, 7.*
   Three-part singing: Grades *7, 8, 5, 6.*
7. Are the pupils "marked" in music? *Yes.*
   If so, are the marks considered in their class standing? *Yes.*
8. What are the steps in your method of teaching children in primary grades to sing by note? *Tonic chord on 3 lines—D, M, S; by the end of year 5-line staff is completed.*
9. What percentage of the pupils in the grammar grades can sing an ordinary hymn tune at sight? *80 per cent.*
10. For what parts is the music used in eighth grade written? *4 parts—alto, soprano, tenor, bass.*
11. How do you manage boys' voices during the time of change of voice? *Sing softly, using only those tones that come with ease.*
12. What is the total number of rooms included in your answers? *About 59.*
13. In how many of these is there a piano? *3.* An organ? *3.*

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[1] These will be found to be unstandardized.

14. (*a*) Does a special teacher of music give all the lessons? *No.* Or (*b*) do the grade teachers give all of the lessons, without special departmental supervision? Or (*c*) do the grade teachers carry on the work under the direction of a supervisor of music? *Yes.*
15. How often does the supervisor visit each room? *Twice a month.*
16. Are prospective grade teachers required to pass an examination in music? *Yes.* If so, who prepares the questions? *The State.*
17. In what branches is the special teacher or supervisor of music required to pass an examination? *In addition to music we expect music teacher to have all the qualifications of grade teachers. We have always had teachers with such qualifications.*

Several factors that would tend toward securing results of great excellence are to be noted in this report. The amount of time given per week is quite exceptional, as reference to Table 2 will show. Voice production is wisely guarded at all times when the voice is used, though special vocal drill is also given. The careful organization of work, as reported under "Features of practice," is also commendable. Somewhat more unusual, however, is the unqualified affirmative used in answering question 7. It leaves little doubt that music in Dunmore is rated as a "regular" and not a "special" subject and is given the sensible sort of treatment that such classification always brings to a subject.

In conjunction with the amount of time accorded, this gives a strong plan of organization. The answers to questions 8, 10, 11, 14, 15, 16, 17 are also commended to the attention of the reader.

MUSIC IN HIGH SCHOOLS AND IN RELATION TO THE COMMUNITY.

The following questionnaire was used as the basis of this investigation of music in high schools:

QUESTIONNAIRE—HIGH SCHOOLS.

18. What is the total number of pupils in the high school or schools? ....
19. How many credits (total) are required for graduation? ....
20. Systematic courses offered in musical study or practice:

Courses.	Is the course optional or required?	Number of pupils pursuing each course.	"Credits" allowed toward graduation for each course.	Is the course taught by the supervisor or by a special teacher?	Titles and authors of textbooks.
Chorus practice........	....	....	....	....	....
Orchestra..............	....	....	....	....	....
Musical history........	....	....	....	....	....
Appreciation...........	....	....	....	....	....
Harmony................	....	....	....	....	....
Sight singing..........	....	....	....	....	....
Elementary theory....	....	....	....	....	....

21. How often is there assembly singing in your high school? ....
22. Is applied music under outside teachers, as piano, voice, violin, etc., credited as school work toward graduation? ...... If so, kindly report, using the form following:

Courses.	Number of pupils pursuing each course.	Length of course in months.	"Credits" allowed toward graduation for each course.
Piano..	....	....	....
Organ..	....	....	....
Voice..	....	....	....
Violin...	....	....	....
All other orchestral instruments..........	....	....	....

23. Are such private teachers required to meet standards set by the high-school principal? ....
24. How many mixed-voice choral organizations are there in the community? ......
25. Is any one of these choruses conducted by the local supervisor or special teacher of music? ....
26. Is the high-school chorus largely influential in providing recruits for these choruses? ....
27. Is the high-school chorus largely influential in providing recruits for the chorus choirs of the community? ....

28. How many amateur orchestras or instrumental combinations are there in the community? ....
29. Is any one of these organizations conducted by the supervisor or special teacher of music? ....
30. Is the high-school orchestra a factor in the maintenance of these organizations?....
31. Does the school own orchestral instruments that are available for students who wish to learn? ....
32. How many and what instruments are so owned? ....
33. If there is a people's chorus, or a people's orchestra, does it meet in a school building or receive any support from the school system? ....
34. In general, is the musical interest, knowledge, and activity of the adults of the community largely influenced by the music in the public schools? .... If not, why not?..

The total number of school systems included in the tables following is 631. Of the 631 schools, 189, or practically 30 per cent, have no music except assembly singing; the other 442, or practically 70 per cent, have some music other than assembly singing.

The distinction between chorus practice and assembly singing could not always be drawn. Incidental evidence in the papers tends to prove that often the assembly singing is of the nature of a chorus rehearsal; that is, the voices are classified as to parts, good and pretentious choruses are studied, and half an hour or more several times a week is devoted to such practice. On the other hand, many who reported chorus singing, as required, evidently had in mind nothing more than assembly singing, even when this involved but the singing of hymns or patriotic songs as incidental to a chapel service, and, it is safe to assume, without classification of the students as to the parts sung. The distinction between these two modes of activity turns the scale more often than any other factor in determining whether to reckon a high school as having any instruction whatever in music or not. The most careful study was therefore given the reports, and the figures presented above may be regarded as reliable. They mean that 30 per cent of the high schools reporting do nothing to advance music beyond the stage it has reached in the eighth grade; and this percentage may be taken as representative.

QUESTIONS AND ANSWERS.

Questions 18 and 19 are incidental to calculations made later, and are, therefore, not reported upon separately.

(20) Systematic courses offered in musical study or practice.

In the tables following, a classification of schools with regard to the number of students enrolled was adopted. The object of this classification was to ascertain whether the size of the school bore any fixed relation to the nature of the musical practice. The enrollment given, however, is for an entire school system, and in the larger cities is, therefore, distributed among a number of high schools.

TABLE 12.—*Chorus practice—Plan of organization.*

High-school enrollment.	Number schools reporting chorus.	Enrollment in reporting schools.	Schools having chorus optional.		Schools having chorus required.		Schools reporting chorus optional and required.	
			Number.	*Per cent.*	*Number.*	*Per cent.*	*Number.*	*Per cent.*
1-100	10	699	7	7.0	3	3.0	....	....
100-250	115	19,759	55	47.8	60	52.1	....	....
250-500	159	53,044	99	62.2	54	33.9	6	3.7
500-750	48	29,044	35	72.9	12	25.0	1	2.0
750-1,000	18	15,132	11	61.1	5	27.7	2	11.1
1,000-2,500	41	55,923	30	73.1	10	24.3	1	2.4
2,500 and over	17	132,848	6	35.2	9	52.9	2	11.7
Total	408	306,449	243	59.5	153	37.5	12	30.0

The percentages are relative to the 408 schools reporting chorus. It is to be remembered that the remainder of 631 high schools have no music or only assembly singing.

"Optional and required" is equivalent to a limited requirement; for instance, for one year or two years, or required of senior class, but optional beyond the fulfilling of these requirements.

The expectation was that the optional plan would be favored in the larger city systems, but the figures do not bear this out. The optional plan seems rather to be favored in town and city systems, where the separate high schools are likely to be fewer and of large enrollment: to wit, 250 to 500, 500 to 750, 750 to 1,000, 1,000 to 2,500. It may be that the requirement in the largest cities is for the sake of that social solidarity so likely to be absent in our cosmopolitan centers; for this is not only highly desirable in school life, but on the school rests largely the responsibility of contributing it to the Nation. Music is not the least agency in this endeavor.

TABLE 13.—*Chorus practice—Percentage of students taking.*

High-school enrollment.	Enrollment in schools reporting chorus optional	Students entering chorus optional.		Enrollment in schools reporting chorus required.	Students entering chorus required.		Enrollment in schools reporting chorus optional and required.	Students entering chorus optional and required.	
		Number.	*Per ct.*		*Number.*	*Per ct.*		*Number.*	*Per ct.*
1-100	422	250	59.2	247	227	91.9	....	....	....
100-250	8,431	4,191	49.7	9,371	8,744	93.3	....	....	....
250-500	28,796	10,080	35.0	14,433	11,958	82.7	2,052	1,067	51.5
500-750	18,200	4,235	23.2	5,333	5,063	94.9	....	....	....
750-1,000	7,400	2,399	32.4	4,290	3,515	81.9	1,712	1,356	79.2
1,000-2,500	32,745	7,572	23.1	12,351	11,241	91.0	1,200	950	79.1
2,500 and over	25,580	7,413	28.9	42,400	37,900	89.3	7,368	3,500	47.5
Total	121,574	36,140	29.7	88,425	78,648	88.9	12,332	6,863	55.6

It will be noted that the total enrollment of any group of schools as given in this table (and computed by adding the numbers for that group in the three enrollment columns) is less than the total enrollment given for the same group in the preceding table. This is due to the fact that a number of schools which reported their enrollment and plan for chorus work did not report the number of students entering chorus. In reckoning the percentage of students taking chorus, these schools were necessarily eliminated. There were 57 such, 35 having chorus optional, with a total general enrollment of 71,701; 21 having chorus required, with a general enrollment of 11,867; 1 having chorus optional and required, with an enrollment of 550. These numbers added to the totals of the 3 enrollment columns of the table will give the total 306,449 of the preceding table.

If chorus practice is made optional, it is chosen by the students of smaller systems, it would seem, more generally than by those of larger systems. The fairly regular decrease in percentage here is quite striking.

Of the 222,331 students in high schools which offer chorus practice under one plan or another and report the number of students entering, 121,651, or 54.7 per cent, are so entered. The greatest percentages are found in the first two groups (the smaller schools), being here, respectively, 71.3̇ per cent and 72.6 per cent. The third, fourth, fifth, and sixth groups vary from 39.5 per cent (fourth group) to 54.2 per cent (fifth group). The last group, of largest city systems, shows a sudden increase to 64.7 per cent.

All but eight of the high schools reporting chorus practice reported as to the credit given it, with the result shown in the next table.

TABLE 14.—*Chorus practice—Credit given.*

High-school enrollment.	Total number of schools reporting as to credits.	Schools reporting optional chorus, grouped as to credits.				Schools reporting required chorus, grouped as to credits.				Schools reporting optional and required chorus, grouped as to credits.			
		No credit.	Poor.	Fair.	Good.	No credit.	Poor.	Fair.	Good.	No credit.	Poor.	Fair.	Good.
1-100	9	4	......	2	......	2	......	......	1	......	......	......	......
100-250	113	21	7	9	16	41	5	4	10	......	......	......	......
250-500	155	44	8	14	30	33	6	7	7	4	......	1	1
500-750	48	11	3	8	13	9	1	1	1	......	......	......	......
750-1,000	18	3	2	2	4	4	......	1	......	1	......	1	......
1,000-2,500	41	10	4	6	10	7	1	2	1	1	......	......	......
2,500 and over	16	1	......	2	3	5	......	2	......	1	......	......	2
Total	400	94	24	43	76	101	13	17	20	7	......	2	3

Summary of Table 14.

	No credit.	Poor credit.	Fair credit.	Good credit.	Total.
Number of schools reporting amount of credit..........	202	37	62	99	400
Percentage..........	50.50	9.25	15.50	24.75	100

It is impossible to state briefly the various methods by which the relative strength of credits was computed for this table. In general, however, all reports were gauged by the following standard:

Good credit.—Sufficient to insure the making in music of at least one-tenth of the total number of credits required for graduation. Or at this rate if on meager time as regards the number of hours per week given or the number of semesters allowed. Credit per hour to equal that given in other branches, according to whether preparation for recitations is or is not demanded.

Fair credit.—Sufficient to insure making at least one twenty-fifth of the total number of credits required for graduation, with the same provisions as the preceding.

Poor credit.—All below fair.

It was expected that a relationship would be discovered between the amount of credit offered for chorus work and the number of students enrolling in chorus when this is optional. A computation was begun on this basis, but was soon abandoned, as the expected relationship did not appear to the slightest extent. Probably the enthusiasm and ability for leadership of the teacher are more weighty factors. Again, when chorus work is strongly credited, it is likely to demand more time and some study along associated technical lines; and, as it is not a major study, but must be added by most students to an already full schedule of hours, it can not be chosen, even by those who favor it most, unless it is administered as a comparatively light addition to their regular work. That chorus practice should be so poorly credited as it is, however, is either a reflection upon the value of the work done, the musical judgment of the school authorities, or the sense of justice of the school officials who fix the credits.

TABLE 15.—*Chorus practice—Evaluation of the music sung with reference to "optional" or "required" plans.*

High-school enrollment.	No. of schools.	Chorus optional; material—			Chorus required; material—			Chorus optional and required; material—		
		Weak.	Good.	Strong.	Weak.	Good.	Strong.	Weak.	Good.	Strong.
1-100..........	7	3	2	....	1	1	....	....	....	....
100-250..........	82	21	16	1	15	29	2	....	....	....
250-500..........	113	15	42	5	13	27	5	2	3	1
500-750..........	29	6	11	4	2	5	....	....	....	1
750-1,000..........	12	2	4	2	2	1	....	....	1	....
1,000-2,500..........	35	8	13	5	2	5	2	....	....	....
2,500 and over..........	17	2	3	1	2	2	5	....	1	1
Total..........	297	57	91	18	37	70	14	2	5	3

Summary of Table 15.

	No. of schools.	Percentage.		
		Weak.	Good.	Strong.
Optional	166	34.3	54.8	10.8
Required	121	30.5	57.8	11.5
Optional and required	10	20.0	50.0	30.0
All classes	297	32.3	55.8	11.7

The terms under which the chorus material used is classified may lead to an impression less favorable than the facts justify.

Under "strong" is included only material that is worthy of the attention of the average small choral society, such as cantatas by the best composers, short oratorios or oratorio selections, choral ballads, excerpts from operas, and some of the lesser and easier operas entire. These are used in larger schools for concert purposes, their preparation often constituting the greater part of the season's work.

Under "good" are included all the better supplementary octavo publications arranged for high-school use, and consisting of oratorio and opera choruses, as well as part songs of varying degrees of length and difficulty, but of unquestioned musical value, and also of several of the better song books for high schools that cover much the same ground as the octavos mentioned.

Under "weak" are included principally song books that are hardly beyond the standards recognized for assembly singing. These books are characterized by part writing that is rudimentary and implies no organized chorus drill, by subjects and texts that are commonplace, by editing that betrays lack of artistic conscience and musical knowledge, and by the inclusion of much material that has no value beyond the fact that it is familiar or popular and can be sung in any style without detriment to it.

Measured by these standards the table shows gratifying accomplishments in high-school chorus singing, over two-thirds of all schools reporting being aligned on the side of music that must be of value to those studying it.

It is worthy of note that where chorus is required the music is somewhat more advanced than where chorus is optional. Evidently the advantage gained through election to chorus by a proficient minority is more than offset by the gain in size, enthusiasm, and strength of support that is experienced when the entire school cooperates in chorus work.

TABLE 16.—*Orchestras (and bands)—Membership, instruments owned.*

[No report of bands was requested, but the reports voluntarily made are recorded.]

High-school enrollment.	Orchestras.		Bands.		Instruments owned by school.
	Number.[1]	Members.[1]	Number.[1]	Members.[1]	
1-100	2(+1)	16	1	25	3
100-250	39(+11)	409	(+1)		33
250-500	76(+15)	944	(+2)		33
500-750	32(+8)	689			69+
750-1,000	8(+2)	143			3
1,000-2,500	31(+6)	774	2(+2)	48	111
2,500 and over	(+3)				43
Orchestras in cities:					
Boston		239			?
Jersey City		30			[2] 7
Providence		70			0
Pittsburgh	(4)	62			[2] 2
Philadelphia		300			0
New York		350			?
Buffalo		0			0
Cincinnati		0			[2] 30
Seattle		80			(3)
Minneapolis		75			[4] 0
Chattanooga[5]		0			
Total	192(+46)=238	4,181	3(+5)	73	295+

[1] The orchestras and bands added in parentheses are all such as failed to report their membership. Therefore the number of members given of orchestras and bands is the number found in the orchestras and bands not tabled in parentheses.

[2] In the 43 instruments owned by schools of 2,500 or over.

[3] Rents instruments.

[4] Just starting fund.

[5] None; "but a number of high-school players play in Chattanooga Symphony Orchestra."

To the sum of 238 orchestras must be added an indefinite number in nine large cities; also a string quartet conducted by Charles A. R. Stone, superintendent of schools, Coldwater, Mich., who further teaches musical appreciation in the high school there.

To the sum of 4,181 members of orchestras must be added the combined membership of 46 orchestras not reported as to the number of members composing them, and also the members of the string quartet just mentioned.

The 192 orchestras reporting their membership have in all 3,037 members, an average of almost 16 per orchestra.

To the 295 instruments owned by the schools and available for practice and orchestral use to student members must be added "a number" in Boston and in New York City. Seattle reports in this connection, the practice of renting such instruments as are needed, and Minneapolis reports "just starting a fund" for the purpose of such purchase. Cincinnati, reporting 30 instruments, states that a fund of $750 was granted by the board of education and that the schools raised $325 more.

The report of Chattanooga, giving evidence of a fine articulation between the school and the community, is most interesting.

TABLE 17.—*Orchestras (and bands)—Credit given.*

High-school enrollment.	None.	Poor.	Fair.	Good.
1-100	2	....	....	....
100-250	35	2	....	7
250-500	59	4	5	15
500-750	17	3	6	10
750-1,000	4	1	....	5
1,000-2,500	18	3	3	10
2,500 and over	4	....	1	5
Total (219 in all)	139	13	15	52
Percentage	63.4	5.9	6.8	23.7

Disregarding the comparative amount of credit given, the figures are as follows: No credit given, 63.4; some credit given, 36.5.

A greater number of orchestras and instrumental ensembles, 239 in all, report upon their leadership. This report is as follows:

TABLE 18.—*Leadership of orchestras and bands.*

Conducted by—	
The supervisor of music [1]	150
A special teacher	76
A high-school teacher	5
The high-school principal	5
A high-school pupil	2
The superintendent of schools (the string quartet before mentioned)	1

As to the credit given orchestral practice, a few words of comment are pertinent.

The number of orchestras and the number of players enlisted in them is cause for hearty congratulation; but proper recognition is not accorded such activity, as is shown by the weak credit given and by a large number of reports that reveal that the orchestras are not under school control, but are loosely organized and lightly regarded.

This means that orchestras are often managed in such a way as to secure no educational results, but are rather contributors to the social pleasures of the schools, and that they aim at no definite advance in musical education for the players and no advance in musical understanding for the hearers. Some knowledge, it is true, must result, but it is not knowledge of the beautiful in music.

The possibilities and functions of orchestral playing were reviewed in a preliminary report of the committee on music, acting under the committee for the reorganization of secondary education for the National Education Association. This preliminary report was read at the meeting of the National Education Association in Salt Lake City, July, 1913. The following are quotations from it:

> This branch of musical study and practice should be an invariable offering. It should be open to any student qualifying for all four high-school years.

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[1] In addition, Seattle reports its orchestras as conducted under both of the first two plans given.

The musicianship that results naturally from ensemble playing is more advanced than that which arises naturally from ensemble singing. More hours of practice and preparation are necessary before successful participation is possible; the expression of the musical thought or impulse is less direct than in singing and becomes a matter, therefore, of greater reflection; the mechanical nature of the medium of expression makes sight reading and a knowledge of staff notation more exact; the number and diversity of the orchestral parts—diversity in pitch, tonal quality, and rhythmic procedure—make the whole a richer complex than is presented in chorus work; and this complexity and variety has attracted composers to orchestral expression for their greatest works.

Nevertheless, the course in orchestral ensemble must be guarded, if it attains its best ends. The following recommendations are therefore urged:

First. The instruments should be played in the manner of their solo capacities, the ideals of chamber music and the refined treatment of each part in a symphony orchestra being ever kept in mind.

Second. Music should be selected that, however easy, still recognizes these particular values for each and every instrument.

Third. The orchestra should be considered an orchestral class or orchestral study club primarily, and a factor for the diversion of the school only incidentally.

Fourth. Instruments should be bought by or for the school, to remain school property, and these should be loaned, under proper restrictions, to students who will learn to play them. The rarer instruments, such as the double-bass, timpani, French horn, oboe, bassoon (or any less rare that are yet usually lacking in any particular school), should be bought. Only by such means can orchestral richness and sonority be secured, the real idiom of orchestra be exemplified, and advanced orchestral literature be made practicable to the students.

Fifth. Seventh and eighth grade orchestras, similarly conducted and equipped with a like generous outfit of school-owned instruments, should be organized as training schools for the high-school orchestra.

Reports of bands were not requested, but all voluntarily reported have been tabulated. The band has a worthy function, and if administered in accordance with the aims just outlined for orchestra, may serve better purposes than merely advertising the school—while continuing to do this. Its varieties of color are, however, inferior to those of the orchestra, and the literature of its instruments, either singly or in ensemble, is notably poorer and more meagre than that provided by the great composers for the orchestra. It is consequently a far less valuable service to a boy to enlist his interest in band than to enlist it in orchestra.

Academic: Musical history, musical appreciation, harmony.—In studying the accompanying tables the following explanation needs to be borne in mind:

First. The total number of schools reporting is divided between two columns. Those in the first column reported the subject, but did not report the number of students entered in their classes. Those in the second column did so report, and the aggregate number of students entered is therefore stated in connection with this number of schools.

Second. The schools are grouped under plans A, B, and C. By plan A is meant the study of the subject in a formal way, as a well-defined, separate branch. By plan B is meant the study of the subject in combination with one or more of the other branches reported, as history and appreciation combined, or elementary theory and harmony combined. Many of these combinations are quite proper and desirable, and imply by their adoption no indefiniteness or weakness in the course. Indeed, had it not been known that in some schools the subjects were separated, the questionnaire would have been formulated to combine them. (Chorus is not included in such combinations under the intention of our plan B; see plan C). By plan C is meant incidental attention to musical history, appreciation, or harmony, or any or all of these, in connection with chorus practice, in which case the work is probably very meager and is of advantage only because of the greater number of students who by this plan at least have their attention directed toward higher phases of musical study.

Third. The largest cities reporting these subjects (cities enrolling more than 2,500 high-school students) are given specific mention. The numbers of students in their classes are not stated, but it must be borne in mind that these indeterminate numbers would swell considerably the totals given.

To the number of students given must be added those in the nine schools reporting the subject taught but not giving the number of students entered in the classes.

The following large cities, each with high-school enrollment of more than 2,500, should also be added as reporting the subject: Boston, Cincinnati, Kansas City, New York, Pittsburgh. In all of these cities the course is elective, and the credit given, where reported, is fair or good. Pittsburgh reports 118 students; the others do not report the number. New York qualifies the musical history as "incidental." In addition to these, Philadelphia reports "weekly five-minute talks" on the subject. Everett, Mass., reports musical history and appreciation in grades 7 to 9. One school of 250 students reports a course in musical history, appreciation, harmony, elementary theory, and sight singing combined for all normal-school students.

To the number of students given must be added those in the six schools reporting the subject taught but not giving the number of students entered in the classes.

The following large cities, each with a high-school enrollment of over 2,500, should also be added as reporting the subject: Boston, Cincinnati, Kansas City, New York, Philadelphia, Pittsburgh (118 students in history and appreciation combined in Pittsburgh). The course in Philadelphia is defined as "vocal and instrumental recitals for and by the pupils." Rochester, N.Y., reporting 50 students, is included in the cities having fewer than 2,500 high-school students that report this subject.

TABLE 19.—*Musical history.*

High-school enrollment.	Schools not reporting number of students entered.	Schools reporting number of students entered.	Plan A.		Plan B.		Plan C.		Elective.	Required.	Credits.				Use player piano.	Use Victrola.	Total number of students under plans A, B, and C.
			Schools offering.	Students taking.	Schools offering.	Students taking.	Schools offering.	Students taking.			None.	Poor.	Fair.	Good.			
1-100		1			1	75				1	1					1	75
100-250	4	16	1	15	8	214	7	643	16	4	6		5	9		2	872
250-500	1	9	2	40	6	130	1	70	10		4		2	4		3	240
500-750	1	6	1	30	4	220	1	46	7			1	1	4	1	4	296
750-1,000	2	4			4	446			5	[1] 1			1	5		3	446
1,000-2,500	1	13	3	76	9	1,214	1	80	13	1	1	2	1	10	2	2	1,370
Total	9	49	7	161	32	2,299	10	839	51	7	12	3	10	32	3	15	3,299

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[1] Has limited requirements, as for normal classes (an excellent plan, held in Washington, D. C., for theory, and in many places besides those named for one branch or another), or required of seniors, or freshmen, and so on.

Summary of Table 19.

Plans of study.	Schools offering.	Students taking.
Plan A	7	161
Plan B	32	2,299
Plan C	10	839
Total	49	3,299

TABLE 20.—*Musical appreciation.*

High-school enrollment.	Schools not reporting number of students entered.	Schools reporting number of students entered.	Plan A.		Plan B.		Plan C.		Elective	Required.	Credits.				Use player piano.	Use Victrola.	Total number of students under plans A, B, and C.
			Schools offering.	Students taking.	Schools offering.	Students taking.	Schools offering.	Students taking.			None.	Poor.	Fair.	Good.			
1-100																	
100-250		3	2	145	1	9			3		1	1	1			2	154
250-500	4	9	6	185			3	680	10	1	5	1	2	5		8	865
500-750		2	2	246					1	[1]1			1		1		246
750-1,000		1	1	27													27
1,000-2,500	2	8	4	327	2	285	3	2,384	9	2	3	1	4	2		3	2,996
Total	6	23	15	930	3	294	6	3,064	23	4	9	3	8	7	1	13	4,288

[1] 1 elective and required.

Summary of Table 20.

Plans of study.	Schools offering.	Students taking.
Plan A	15	930
Plan B	3	294
Plan C	6	3,064
Total	24	4,288

As the two subjects just reported, history and appreciation, are very properly often combined, and as their objective, whether they are combined or not, is much the same, the following table of the two together is of interest:

Summary of schools offering both history and appreciation of music.

Plans of study.	Schools offering.	Students taking.
Plan A	22	1,091
Plan B	35	2,593
Plan C	16	3,903
Total	73	7,587

To these must be added the number of school systems and the cities given above as reporting the subjects, but (except Pittsburgh) not the number of students pursuing them.

To the number of students given must be added those in the four schools reporting the subject but not reporting the number of students entered in the classes.

The following large cities, each with a high-school enrollment of over 2,500, should also be added as reporting the subject, but with the exception of Pittsburgh and Newark, N. J., not reporting the number of students: Boston, Cincinnati, Kansas City, Newark, N. J. (49 students), New York, Philadelphia, Pittsburgh (88 students). New York reports harmony as "incidental" and Philadelphia reports it for "senior girls."

From the foregoing it is found that all three subjects, taught to some extent alone or in some combination, enlist a total of 112 classes (or groups of classes within a city system), with an enrollment of 8,292 students. Taught under plan A, the number of classes or class groups is 54, enrolling 1,536 students; under plan B the number is 40, enrolling 2,750 students; under plan C, the number is 18, enrolling 4,006 students, with additions from incompletely reported systems and in large cities, as these have been stated before.

TABLE 21.—*Harmony.*

High-school enrollment.	Schools not reporting number of students taking.	Schools reporting number of students taking.	Plan A.		Plan B.		Plan C.		Elective.	Required.	Credits.				Total students under plans A, B, and C.
			Schools offering.	Students taking.	Schools offering.	Students taking.	Schools offering.	Students taking.			None.	Poor.	Fair.	Good.	
1-100															
100-250	2	10	7	64	2	120	1	3			1		4	6	187
250-500		11	9	98	2	25							6	5	123
500-750		5	5	104							1		2	1	104
750-1,000		2	2	15											15
1,000-2,500	2	11	9	164	1	12	1	100				2	2	7	276
Total	4	39	32	445	5	157	2	103			2	2	14	19	705

Summary of schools offering harmony.

Plans of study.	Schools offering.	Students taking.
Plan A	32	445
Plan B	5	157
Plan C	2	103
Total	39	705

The following inferences may safely be drawn from these findings:

1. The order of popularity with the students in regard to these three subjects is, (1) appreciation, (2) history, (3) harmony. Also the less formal and academic the plan, the greater its popularity; to the extent that when offered in an incidental way only, in connection with chorus practice, either subject enlists a remarkably increased number of students. Unquestionably the element of time is an influential one in bringing about this condition. College entrance requirements or vocational courses insistently demand the whole of serious endeavor that the pupil can put forth, though music may be of infinite attractiveness and interest to him. The remedy is certainly to insist that the colleges broaden their educational programs, and that vocational courses in high schools be carefully worked to the maximum of efficiency in fewer hours, to the result that students looking to severely practical ends will not miss entirely the enrichment of life given by study of the deeper and nobler art values.

2. The order of popularity with school authorities is (1) history, (2) harmony, (3) appreciation, with a clearly manifest and wholly intelligent desire to teach harmony by plan A, history by plan B (combined almost constantly with appreciation, in order to avoid a pedantic course), and appreciation by plan A.

All three branches are almost invariably elective, except when taught informally, as incidental to chorus, when the "required" plan at once acquires favor, or when required in a limited way, as, for instance, of prospective teachers. The credit given is generally reasonably good, as compared with that given in regular academic branches.

There is manifest desire to make high-school music something more than the chorus singing that entails no intellectual reaction upon the material sung. The number of high schools reporting broader activities is part proof of this; and a great number of schools that have nothing but assembly or chorus singing volunteer comments that reveal such a desire. "We are organizing such courses"; "We have no such courses, I am sorry to say"; We are trying to have this done," are phrases made familiar by the reports. In practice this leads to the strengthening of courses in chorus singing by incidental study of one or more of the branches listed, or to the adoption of formal courses in these branches. The first of these solutions turns the attention of the large number of students to important advanced phases of musical knowledge; the second gives thorough instruction in these branches to a small number of students. This specialized activity is in harmony with the tendency of the age; and it is probable that general enlightenment follows more quickly from it than from comparatively superficial knowledge given to a larger number.

No report of the use of player pianos and talking machines was asked for, but the place given them in schools is so important that a number were voluntarily reported, namely, 9 player pianos and 28 talking machines, plus a number not definitely stated in Kansas City, Mo. (both instruments). The value of these in musical history and appreciation classes can not be overestimated; yet, if these voluntary reports are representative, a word of comment and suggestion is certainly due. If the proportions are representative of general practice, history and appreciation must be altogether too strongly directed to opera, for it is here that the talking machine is indispensable. But it must not be forgotten that, great as this field is, the music par excellence of musicians is not that of opera, but is absolute music—the symphony, the sonata, the string quartet. Here music as a purely tonal art holds undisputed sway, and here pure music as an independent art is to be studied. The opera should not be studied less, but the great instrumental forms should, beyond question, be studied more than the showing made by these voluntary reports would indicate.

Sight singing and elementary theory.—The tables subjoined are made on substantially the plan used for the three foregoing. The number of schools is divided into two columns as before, the first column recording schools that do not state the number of pupils entering the offered classes, the second recording schools that do state the number of students so entering. The larger cities, with two or three exceptions, have not been separately commented upon, and all these are included in the general totals.

TABLE 22.—*Sight singing.*

High-school enrollment.	Schools not reporting number of students taking.	Schools reporting number of students taking.	Plan A.		Plan B.		Plan C.		Elective.	Required.	Credits.				Total number students under plans A, B, and C.
			Schools offering.	Students taking.	Schools offering.	Students taking.	Schools offering.	Students taking.			None.	Poor.	Fair.	Good.	
1-100															
100-250	1	9	5	395	2	45	2	262	7	3	3	1	1	4	
250-500	2	8	5	527	3	98			7	3	2		1	3	
500-750		3	3	817					3				1		
750-1,000															
1,000-2,500		5	3	588	2	74			3				1	3	
2,500 and over		3			2	1,300	1	3,400	3				2	1	
Rochester		1			1	67				(1)			1		
Buffalo		1			1	600				(2)				1	
Cincinnati		1					1	4,900		(3)				1	
New York	1									(4)			1		
Total	4	31	16	2,327	11	2,184	4	8,562	23	6	5	1	8	13	13,073

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[1] Required of normal-school girls, optional otherwise.
[2] Required of normal classes.
[3] Practically required of all.
[4] Four years in music required of normal classes.

TABLE 23.—*Elementary theory.*

High-school enrollment.	Schools not reporting number of students taking.	Schools reporting number of students taking.	Plan A.		Plan B.		Plan C.		Elective.	Required.	Credits.				Total number students under plans A, B, and C.
			Schools offering.	Students taking.	Schools offering.	Students taking.	Schools offering.	Students taking.			None.	Poor.	Fair.	Good.	
1-100		2	2	25						2	1		1		
100-250	2	9	7	395	1	60	1	122	6	[1] 5	2	1	3	2	
250-500		13	12	440	1	10			8	[2] 5	1		5	7	
500-750		2	1	92	1	88			1	[2] 1			1		
750-1,000															
1,000-2,500	1	1			1	129				[2] 1			1		
2,500 and over															
Cincinnati	1														
New York	1														
Total	5	27	22	952	4	287	1	122	15	[3] 14	4	1	11	9	1,361

[1] Two required limitedly.

[2] Required limitedly.

[3] Nine required limitedly.

As these two subjects, like history and appreciation, are frequently (and properly) combined, the following summary is given:

Summary of schools teaching both sight singing and elementary theory.

Plans of study.	Schools offering.	Students taking.
Plan A	38	3,279
Plan B	15	2,471
Plan C	5	8,684
Total	58	14,434

Plans B and C in connection with these subjects imply no questionable combinations, but only various desirable blendings of elementary theory, sight singing, and chorus singing. It is worthy of note that the greater number of schools make these branches elective or limit the requirement and give fair or good credit. The total showing is extremely gratifying; for, although it may be urged that these branches should be completed before the high school is entered, thereby enabling the high school to devote itself to beginning adult musical activities rather than to completing elementary ones, still, if this has not been done, there is solid merit in attacking these problems vigorously at the later date.

In closing this survey of advanced work in music in high schools, some words of appreciation are due. Only a small percentage of the total number of schools reporting have such work; but had conditions 20 years ago been reported and could such a report now be compared with the present one, it would be found that the progress is enormous, and that it has practically all taken place in this span of 20 years. Since the hope of a musically appreciative people rests upon the high schools rather than immediately with the grades or with the private teacher of music, this advance is most significant and gratifying. It is hoped that all high schools will learn of it; for the practice is so recent and so little of tradition and technic are associated with it, that schools considering such work lack both encouragement and example and often resign the project hopelessly in consequence.

(21) How often is there assembly singing in your high schools?

A total of 571 schools reported on this question, with the following result:

TABLE 24.—*Assembly singing.*

High-school enrollment.	Schools not having assembly singing.	Schools having assembly singing, per week—					Schools having assembly singing—			
		Once.	Twice.	Three times.	Four times.	Five times.	Once in two weeks.	Once a month.	Few times per year.	Occasionally.
1-300	64	76	53	23	4	59	....	1	....	....
300-900	62	65	35	18	2	31	3	2	....	....
900 and over	19	28	7	3	......	8	2	....	2	4
Total (571 schools)	145	169	95	44	6	98	5	3	2	4
By percentage	25.3	29.6	16.6	7.7	1.0	17.2	....	....	....	....

Like the amount of time given per week to music in the grades, assembly singing is determined largely by exigencies of the daily program. This accounts for the large numbers having such singing once or twice a week (leaving the same hour open for a three or four hour subject on other days) and again five times a week, while singing three times and four times a week is avoided.

A great number of schools reporting no assembly singing state that this is through lack of an assembly hall. If assembly singing alone were defeated by such a shortcoming, it would be of comparatively little moment; but other values that are lost to both school and community by lack of an auditorium in a large high-school plant are beyond computation.

(22) Is applied music under outside teachers, as piano, voice, violin, etc., credited as school work toward graduation? ...... If so, kindly report, using the form following.

(23) Are such private teachers required to meet standards set by the high-school principal?

This, the most recent feature of practice in relation to high-school music, as it is one of the most progressive, has already gained considerable favor, as the subjoined table clearly shows. The practice rests upon the just assumption that a high school should not discredit educational endeavor merely because this is extramural and beyond the power of the school to provide. The further assumption is of course included that, in a just and broad evaluation of all educational subjects, applied music, in the case of those who are attracted to it, is not less valuable than literary study, geometry, or other regular branches; with the additional implication that education will not be less broad if one of these regular branches, through each of one or more of the high-school years, is exchanged for equivalent industry and progress in some line of musical practice. If such advantage is denied, as it has been in the past, many students to whom music as an avocation or as a profession would mean much are forced to abandon it, at the time when practice is most essential, for the sake of what are to them less desirable and less productive studies; or else they must abandon the school training in its entirety and devote themselves to nothing but music, with such scattered general training in addition as their often meager resources may permit them to obtain. Between these two extremes it would seem that the middle course is desirable, namely, that the State still provide all that is wished of a general educational nature, and also supervise the extra-mural study in a way to insure its value to the student and its right to a place in a governmental system of education.

TABLE 25.—*Applied music.*

Schools.	Number of students in—					Total students by schools.	Length of course.				Credit allowed.		
	Piano.	Organ.	Voice.	Violin.	Orchestral instruments.		One year.	Two years.	Three years.	Four years.	Poor.	Fair.	Good.
[1] A	20		8	3		31	1						
B	25					25				1			1
C	(2)					2					(Unsettled.)		
D	44		1	2	1	48				1			1
[3] E	38	2	4	21		65				1			1
F	5					5	1						1
G	15		5			20	1						1
H	6				1	7	1						1
[4] I	(2)			(2)		(2)	1						1
J	(2)	(2)	(2)	(2)	(2)	(2)		1					1
K	(2)	(2)	(2)	(2)	(2)	50		1					1
L	(2)	(2)	(2)	(2)	(2)	20	1					1	
M	(2)	(2)	(2)	75		75	1						1
N	18		3	5		26				1			1
O	9		1	2		12				1			1
P	5			3		8				1			1
Q	6					6				1			1
R	5		1			6		1			1		
S	45		5	10		60				1			1
T	40		1	8		49				1			1
20	281	2	29	33	98	513	7	3	......	9	1	1	16

[1] The letters from A to T are merely to distinguish separate schools of school systems.
[2] Credited, but numbers of students taking not reported.
[3] The schools designated E and M have 96 students altogether in violin and other orchestral instruments.
[4] The school designated I offers the courses not to high-school students, but to students in seventh, eighth, and ninth grades.

In addition to the 20 school systems here reported, there are 4 that report crediting such work in general, but without specification of the branches recognized or the number of students enrolled in them. Also 12 school systems reply that the plan is under consideration by them; and New York City adds to its negative report: "Should like to see this done." One school, further, applies the plan only "in special cases."

Who is to examine and certify to the progress made is a problem to all contemplating the introduction of this plan. Of the 20 schools reported, 11 state that the principal of the high school is the judge (doubtless with all needed cooperation); 3 specify the supervisor of music as responsible; 1 leaves judgment to a jury from the department of music in a near-by college; and 1 designates the board of education as examiners. The remaining systems give no information in this respect.

The towns and cities that comprise the 25, grouped by States, are as follows: Berkeley, Pomona, and San Jose, Cal.; Bristol, Conn.; Twin Falls, Idaho; Alton, Aurora, and Oak Park, Ill.; Winfield, Kans.; Paris, Ky.; Augusta, Me.; Concord, North Andover, and Westboro, Mass.; Ann Arbor and Battle Creek, Mich.; Minneapolis, Minn.; Rahway, N. J.; Norwich and Utica, N. Y.; Ashtabula and Cincinnati, Ohio; Pawtucket, R. I.; Centralia, Wash.; Superior, Wis.

As this report is going to press additional information describing a most excellent plan comes in the form of a letter from Dr. Hollis Dann, principal of the department of music of Cornell University, Ithaca, N. Y. In connection with it the fact should be recorded that to Dr. Dann himself, in large measure, is due the credit for these admirable provisions, for which he has labored steadfastly and efficiently. His statement that the plan is not generally known is borne out by the following facts gained by a brief additional survey of the reports received. From the State of New York 48 reports (towns and cities) were received. Two of these, Utica and Norwich, report that they credit applied music, and Buffalo answers the query as to whether this is done, "No, but think it soon will be." The remaining 45 give negative replies that reveal no hint of the provisions that Dr. Dann reports. That these will soon be better known must be the hope of all interested in musical education.

Quotations from the letter follow:

> No doubt you know that we have a plan in operation in the State of New York which allows credit for outside music study taken in approved schools. This scheme was included in the 1910 syllabus, which is now being revised. It is possible for a student to secure 35 counts in music toward a 72 count regents' diploma. Twenty counts are allowed for regents' examinations in music, as follows:

	Counts.
Chorus singing and rudiments of music	2
Elementary harmony	3
Advanced harmony and counterpoint	4
Musical form and analysis	4
Dictation and melody writing	3
History of music and acoustics	4

> On completion of this theoretical course 15 counts are allowed for musical practice for students of regularly accredited and inspected schools on certificate of the principal. The remaining counts must include history (2 three-hour courses), English (4 years), and a foreign language (2 years) and 8 elective counts.

It is not generally known throughout the State that such a plan is in operation, and comparatively few students have taken advantage of this opportunity to major in music while pursuing a high-school course.

(24) How many mixed-voice choral organizations are there in the community?

(25) Is any one of these choruses conducted by the local supervisor or special teacher of music?

(26) Is the high-school chorus largely influential in providing recruits for these choruses?

(27) Is the high-school chorus largely influential in providing recruits for the chorus choirs of the community?

(28) How many amateur orchestras or instrumental combinations are there in the community?

(29) Is any one of these organizations conducted by the supervisor or special teacher of music?

(30) Is the high-school orchestra a factor in the maintenance of these organizations?

Whether high-school music tends, in the opinion of its teachers and supporters, to maintain and stimulate the musical activities and interests of the adults of the community, was the subject of this inquiry. Of the 476 school systems having music in their high schools and endeavoring here to answer, a large majority, it will be observed, believe that chorus choirs are recruited from their high-school choruses; but less than half feel that the high-school choruses are influential in recruiting the local choral societies. One-fourth of these systems report their supervisors of music active outside of the schools in conducting choruses or orchestras. On the other hand, a number of supervisors, in towns quite large enough to maintain good choral societies, report explanatorily, that there are no organizations of the kind for the supervisor to conduct. To these it may reasonably be suggested that the supervisor should be a leader in organizing such societies, if none exist; and especially if he remains in the community a number of years his work may be of such character as to find fruition in the demand for a choral or orchestral society, which would owe its inspiration to him whether he conducted it or not. This, though not possible of fulfillment always, must be the hope of all those who, by virtue of their position in the schools, become directors of the public music.

TABLE 26.—*Articulation of high-school and community music.*

Population of towns and cities.	Number of places answering.	Places in which supervisor is active in city as conductor.	Places in which high-school music recruits adult choruses.	Places in which high-school music recruits chorus choirs.	Places in which high-school orchestra recruits adult orchestras.	Places not answering.	Places answering no music in high school.
Under 10,000..	216	47	[1] 71	[2] 167	51	37	27
10,000 to 25,000..	146	33	57	124	46	15	11
25,000 to 50,000..	61	19	33	49	22	7	2
50,000 to 100,000.	25	6	13	20	13	4	3
100,000 or over...	28	14	15	19	14	1	3
	476	119	[1] 189	[2] 379	146	64	46

[1] Plus 1 questionable.

[2] Plus 3 questionable.

The answers to questions 31 and 32 were included in the report on orchestras in the high schools.

(33) If there is a people's chorus, or a people's orchestra, does it meet in a school building or receive any support from the school system?

(34) In general, is the musical interest, knowledge, and activity of the adults of the community largely influenced by the music in the public schools? If not, why not?

The first of these inquiries sought to discover whether "a contribution of the schools to the culture of the citizens over school age," as Supt. Condon, of Cincinnati, Ohio, expressed it, is made, with respect to music, in many communities. The answers revealed that a small percentage, though perhaps larger than might be expected, do make such contribution. The second inquiry endeavored to ascertain the effect of school music upon the community, in the judgment of those interested and in position to observe the facts. This report, though very favorable, is possibly not justifiably so in fullest measure; for in many places where answers to preceding questions revealed almost a total dearth of musical accomplishment in the schools there was emphatic assertion that the schools were extremely beneficial musically to the community. On the other hand, there were unfavorable answers to this question in cases where the school music was manifestly of a very high order and most ably administered. On the whole, however, optimism predominated—disproportionately so, to a considerable extent, as shown by the evidence in the papers themselves. Nevertheless, that a very large majority of these favorable judgments are well taken and are amply justified admits of no question.

Table 27.—*School support for community music and influence of school music on the community.*

Population of towns and cities.	Number of towns and cities reporting as to school aid for people's choruses and orchestras.			School music influencing beneficially the music of the community.			
	No aid.	None to aid.	Aid given.	Places reporting "No."	Places reporting "Yes."	Places reporting "Questionably."	Unanswered.
1 to 10,000..	243	18	10	34	143	23	68
10,000 to 25,000....	152	11	10	22	100	14	38
25,000 to 50,000....	62	4	4	10	48	3	10
50,000 to 100,000...	29	....	1	3	21	1	5
100,000 or over.....	21	....	11	5	21	2	4
	507	33	36	74	333	43	125

Of the 507 towns and cities reporting "No aid" to community music, a number may be like the 33 in the next column—having no organizations to which to give aid.

The plan recently adopted in Pittsburgh, Pa., should be quoted here, as it is probably unique in its features and scope. Under the department of special schools and extension work not only are night-school classes encouraged, but many social-center groups are formed. Included in the plans for these is encouragement for choral societies, orchestras, and other musical organizations, as shown by the following quotations from the announcement of the department for the current year 1913–14:

> While the spirit and purpose of educational extension is to provide what the people need and want, there are certain lines to which special attention will be given.
>
> The organization of choral societies and orchestral clubs is heartily encouraged. The school buildings are open to such bodies for evening rehearsals, and directors and all needed equipment will be provided when a sufficient number apply for orchestral ensemble or chorus practice. All who would enjoy such musical activities are urged to confer with others of similar tastes in their districts and to lay their plans before the director of music. If the number of members required for separate organization is not found in a district, those who so desire are at entire liberty to join any of the choruses or orchestras in neighboring or central districts.
>
> It is proposed to form a large central orchestra at the Fifth Avenue High School, and to continue the choral association in the Allegheny High School which was so successfully conducted last year.
>
> If there are several choral clubs capable of studying good works, it is hoped that they may be combined at the end of the season to form a large mass chorus competent

> to give an excellent concert performance of the standard works so studied. The same plan is advised for the orchestras; and if these are of sufficient capability, they could provide not only orchestral numbers, but could eventually play the accompaniments to the chorus excerpts, cantatas, or oratorios that the choral clubs might have prepared.
>
> Musical study clubs and classes in musical appreciation, harmony, and voice may also be organized, and plans looking toward such organizations will receive full consideration and all possible support.
>
> National groups, groups composed of those from other lands who wish to preserve the songs and study the music of their native countries, using their native tongue, will find the resources of the department at their service, wherever sufficient numbers are interested.
>
> Opportunity for the promotion of vast musical interests that in past years have had no similarly convenient and adequate channel for expression is thus thrown open to the citizens of Pittsburgh. The resources are theirs, and it is hoped that the widest use will be made of them.

Under these provisions there are now, in this second year for the plan, five choral societies, four chorus classes, and one class in voice culture, with a combined membership of 600, and three orchestras, with total membership of 60. The movement is only in its inception, but it is gaining strength almost daily.

Places listed as reporting "Questionably" as to whether their school music influences beneficially the community music or not, often state that they "think it does slightly," or "it may," or "not as much as it should." All such doubtful reports are listed in this column.

Among the large cities that state the good effects of school music upon the musical life of the community are Rochester, Boston, Cincinnati, Indianapolis, New Orleans, New York City, Seattle, and others.

Cincinnati, with good reason, is especially emphatic in this statement. There the schools have kept in close touch with the musical activities of the community, including the biennial May Festivals, which hold preeminent place among undertakings of the kind. Not only have great choruses of pupils from the grades participated in these, singing in such works as Benoit's "Into the World," Van der Stucken's "Pax Triumphans," and Pierne's "Children's Crusade," but the adult chorus has received great benefit from the musical training so well begun in the schools. The extent of this influence, as well as other interesting features of the school work in relation to the community, are partially revealed in the quotations which are subjoined, taken from the report of Walter H. Aiken, supervisor of music in the Cincinnati public schools.

In answer to question 20, "Systematic courses offered in musical study or practice," Mr. Aiken files the following with the statement, "This is an accepted course for professional training."

MUSIC.

- First year:
  - English, 4.
  - Elocution, 1.
  - German, 5.
  - Algebra, 4.
  - Physical training, 2.
  - Chorus, 1.
  - Music dictation, 1.
  - Instrumental art outside of school, 10.
- Second year:
  - English, 4.
  - Elocution, 1.
  - German, 5.
  - Geometry or ancient history, 5.
  - Physical training, 2.
  - Chorus, 1.
  - Intervals and chords, 1.
  - Instrumental art outside of school, 10.
- Third year:
  - English, 4.
  - Elocution, 1.
- Third year—Continued.
  - German or French, 5.
  - Physics, 6.
    - Or medieval and modern history, 4.
  - Physical training (optional).
  - Chorus, 1.
  - Harmony, 2.
  - Instrumental art or vocal, 10.
  - Music appreciation.
- Fourth year:
  - English, 4.
  - Elocution, 1.
  - German or French, 5.
  - American history and civics, 5.
  - Physical training (optional).
  - Chorus, 1.
  - Harmony or counterpoint, 2.
  - Vocal and instrumental art, 10.
  - Music appreciation.
  - History of music, art.

22. Is applied music under outside teachers credited? *Yes; if under school control; and 60 students are recorded as working under this provision.*

26. Is the high-school chorus largely influential in providing recruits for these [community] choruses? *Made up almost entirely of former graduates.*

33. If there is a people's chorus, or a people's orchestra, does it meet in a school building or receive any support from the school system? *People's chorus supported by schools in connection with night high schools.*

34. In general, is the musical interest, knowledge, and activity of the adults of the community largely influenced by the music in the public schools? *Yes; decidedly so. The schools participate in great works of art at our great festivals.*

In addition Mr. Aiken proffers the following personal statement and printed regulations:

Music has had a place in Cincinnati schools for 69 years. During this period all of the pupils in the community, regardless of whether they could sing or not, have been under its influence. This is the condition to-day. A technical course or vocational course has been added as noted below:

MUSIC.

The technical course of music is offered in order that the work of the high school may supplement and strengthen the work as conducted in the college of music and by private teachers of music. It is offered mainly for such pupils as desire to make a serious study of music, with a view to performance, teaching, or composition. Those who want to be kindergartners will be especially helped by this course, but they should also carry "drawing" as an extra.

The course requires that the pupil shall be a student of either instrumental or vocal art at the colleges or with private teachers, and shall be willing to devote one and one-half hours per day, outside of the time spent with the school music, to instrumental or vocal practice.

German is the language required of the student in this course for the first two years, after which he may continue German or study French for two years. Neither botany nor zoology is required in the first year, and in the second year a choice is given between geometry and ancient history.

The student will take in school, in the first year, oral and written music dictation, which includes the following: The singing of musical phrases to pupils, they in turn writing the same; melody writing, together with the writing of the various major and minor scales, and a general review of the elements. This is followed in succeeding years with a study of primary chords, of harmony, and musical appreciation.

The art of becoming intelligent listeners will receive the attention which it merits throughout the four years of the course. This course will lead to graduation, but not admittance to the university. It is a vocational course. All instrumental or vocal art pursued outside of the school is at the expense of the pupil.

A pupil is entitled to credit for his instrumental work who shall successfully pass the requirements of the examining boards of our reputable colleges or private teachers and can furnish to the school authorities, upon examination, satisfactory evidence that he is worthy of such credit.

In St. Louis, articulation of the school music with the best of music in the community is admirably secured by means of concerts given by the choruses of high-school students in connection with the St. Louis Symphony Orchestra. Several such concerts are given each season in the beautiful auditorium of the Soldan High School. One of these programs is submitted herewith. The picture which it calls to mind of many hundreds of high-school boys and girls cooperating seriously with a body of advanced musicians in the production of artistic music can not but be inspiring to all who have this cause at heart.

Choral-Symphony Concert.

St. Louis Symphony Orchestra
MAX ZACH, Conductor

Chorus of High-School Pupils
E. L. COBURN, Conductor

SOLDAN HIGH SCHOOL
Union and Kensington Avenues

Tuesday, March 18th, 1913
8.15 P. M.

Program

1. Overture to "Raymond"	*Thomas*
Chorus	
2. (a) Even Bravest Hearts	*Gounod*
(b) When the Foeman Bares His Steel	*Sullivan*
3. (a) Adagio Pathetique	*Godard*
(b) Entr' acte Waltz	*Hellmesberger*
Chorus	
4. (a) Two Grenadiers	*Schumann*
(b) Memorial March	*Chopin*
5. "Coppelia" Ballet	*Leo Delibes*
Nocturne	
Waltz	
Czardas	
Chorus	
6. (a) Gypsy Life	*Schumann*
(b) Song of the Vikings	*Faning*
7. Rhapsodic Dance, "The Bamboula"	*Coleridge-Taylor*

One of the most interesting features of this entire report is found in the statements made as to why school music is not influential in those places that report it so lacking The most frequent explanation is that the subject is too new in the schools, 14 places so reporting. That the place is suburban and has no individual life is reported from 3 places. In many reports the community is itself roundly criticized and held to be responsible. and no doubt with perfect justice. "All commercial"; "All for money"; "Care for nothing but picture shows"; "Only 10 years from sagebrush" (this from a western town, of course); "Too much society"; "A manufacturing town"; "A mining town"; "Care only for vaudeville and comic opera"—these are some of the comments made by earnest and thoughtful superintendents and supervisors upon the towns in which they are trying to do a good work. One sees a scroll of tawdry, superficial life open before him as he comes upon one after another of such reports. But against these must be weighed the hundreds of honest optimistic reports, many of them bright with justifiable enthusiasm, and all confident of still greater results to come when this comparatively new endeavor shall have gained its full sweep.

MUSIC IN STATE SCHOOL SYSTEMS.

The questionnaire sent to State departments of education was as follows:

QUESTIONNAIRE.

1. Is music required in the public schools of the State in grades below the high school?
2. If so, how long has it been required?
3. If not, was it required at any time in the past?
4. Do the requirements specify the nature and grade of work required?
   If so, what are the important specifications?
5. Are "State adoptions" of textbooks made?
6. If so, please give titles and authors of textbooks in music last adopted.
7. Is music required in the high schools of the State?
   If so, what is the nature and extent of the work required?
8. Are special teachers or supervisors of music in the public schools required to pass examinations before receiving teachers' certificates?
9. If so, kindly check below the subjects in which they are examined:
   Elementary theory and sight singing.
   Harmony.
   Counterpoint.
   History of music, æsthetics of music, musical appreciation.
   Voice.
   Piano.
   Methods, practice, material.
   History of education, pedagogy.
   Psychology.
10. Are certificates from schools of music accepted in lieu of examination?
    If so, what type of schools are so accredited?
11. If neither examination nor a certificate is required, what qualifications must prospective supervisors of music show?
12. Is an examination in music included in the requirements for a grade teacher's certificate?
13. If so, what does the examination include beyond rudiments of music?
14. By what means, if any, is the efficiency of the instruction in music in the public schools of the State ascertained?
15. By what means is such instruction encouraged?
16. Are State specialists or supervisors of music employed?
    If so, how many?
17. Is music taught in reformatory institutions?

This questionnaire was forwarded to 48 States, and to Hawaii, the Philippine Islands, and Porto Rico. A report that would include all these was earnestly desired, and a second copy of the questionnaire was sent to States failing to respond in the first instance. At the present time (January, 1914), when further postponement of the report is inadvisable, Colorado has not replied. The tables and percentages given therefore embrace a maximum of 47 States. The reports from Hawaii, the Philippine Islands, and Porto Rico, which are of unusual interest, are given separate consideration. It will be noted, however, that all of the 47 States replying are not included in the total of affirmative and negative replies recorded for certain questions. This is due primarily to failure of some States to answer these questions at all. In other instances the questions are answered indirectly by statements that reveal practices which do not fall exactly under the implications of the inquiry. Such special provisions, if they are clearly described and if they are of considerable general interest, are given special mention.

QUESTIONS AND ANSWERS.

(1) Is music required in the public schools of the State below the high school?

(2) If so, how long has it been required?

(3) If not, was it required at any time in the past?

The number of States requiring music in the grades is 10; those not requiring music in the grades number 37.

Of these 37 States not requiring music, Connecticut quotes a special statute authorizing any "town school committee to employ one or more teachers to give instruction in the rudiments and principles of vocal and instrumental music in its several schools." Indiana answers the question by the words "when locally required." Massachusetts cites a statute that names music in a large list of subjects that "may be taught in the public schools" (another list of subjects being required). Oregon replies "optional." South Carolina makes no reply beyond sending a "course of study for elementary and high schools," issued by the State department of education, which includes "singing" in the outline for each grade. Tennessee reports, "Vocal music is in our course of study." Vermont reports, "The Vermont law does not require music to be taught, but a school board may provide for such instruction within the township, or the joint committee of union of townships for supervisory purposes may employ an instructor in singing and the State will rebate $200 of salary paid each instructor, if salary is not less than $600." Virginia answers, "Not absolutely required, but local boards are authorized to provide for it." These eight are probably matched by similar provisions in other States included among the 37, and are properly classified in the negative group, with the possible exception of the 2 that include music in their State courses of study. Usually such State courses are not mandatory, but are rather recommendations of proper courses. There is little doubt, from other evidence at hand, that this is the case with the 2 States now in question and the classification made is therefore almost certainly correct.

The following is a list of the 10 States requiring music in the grades, together with the number of years during which the requirement has been in force for each: California, 33 years; Iowa, 14 years; Kansas, 1 year; Louisiana, 10 years; Maryland, 13 years; Nevada, 4 years; Oklahoma, 5 years; South Dakota, 3 years; Utah, not stated; Washington, "for years."

The geographical element in this list compels attention. Cultivation of music is usually a mark of social maturity, yet here we find the newer States making early provision for musical development. The conclusion is that the strong idealism and humanism of the West, coupled with the opportunity to observe and select from highly developed social and educational systems of different orders, have resulted in an educational program that at the outset recognizes values which have come to older Commonwealths by slow stages of evolutionary development. Climate, and the temperament that results from it, as well as racial inheritance, may also be factors with regard to the interest in California; and in Louisiana the Latin racial strain at an early date bequeathed to the State musical institutions and traditions that persisted and grew with the years.

The support given music in the schools is not all measured by the inquiry as to whether it is or is not a legally required subject. Other means of support and encouragement will be revealed in later paragraphs. It is sufficient to mention now that in many States general interest and demand have all the effect of legal enactment—indeed, more than such enactment would have if unsupported by popular interest—and that in these States advanced work in music is to be found in practically every school district.

No instance was reported of a requirement for music being in force for a time and later being annulled.

(4) Do the requirements specify the nature and grade of work required? ..... If so, what are the important specifications?

There is considerable difficulty in classifying under general headings the answers to these queries. Specifications of the nature and grade of work required are appropriate in outlines issued by State boards of education rather than in statutory enactments. If the outlines of a State board are mandatory, as in Utah, for instance, such detailed outlines are, of course, genuine requirements. In most States, however, such outlines are only recommendations. If the State requires music, these recommendations assume the character of detailed statements of the legislative purpose, and thus obtain a large measure of authority; but if music is not a State requirement, they remain only recommendations possessing such authority as any recommendation from distinguished and competent men may have, and no more. Work of certain nature and grade can not be said, therefore, to be required unless it is specified in the school law, or unless it is specified by a State board that has, and uses in the specifications, legislative power; or, stated positively, it may be said to be required if specified in the statutes or by a board with legislative power. These are the terms understood in the following classifications, both in States in which music (of some nature, not specified) is required by statute and in States where it is not required by statute.

The number of States reporting the nature and grade of work required in music (in grades below the high school) as not specified is 33. In 31 of these States music in the grades is not required at all; in 2, Nevada and South Dakota, it is required in general, though details of study, we here find, are not stipulated.

The number of States reporting the nature and grade of work required in music (in grades below the high school) as being specified is 8. They are California, Iowa, Kansas, Louisiana, Maryland, Oklahoma, Utah, and Washington.

Among the 31 States not requiring music in the grades at all are found the following, which deserve special comment:

Arizona reports: "In music our schools are in advance of the law. The course of study (State) outlines a plan generally followed by teachers."

Alabama, Georgia, Indiana, Massachusetts, Missouri, Oregon, Tennessee, Virginia, West Virginia, and Wisconsin similarly report a course of study outlined but without mandatory power, except in the case of Georgia, which gives limited power, as noted later. Probably many other States not specifically reporting this plan have it nevertheless, and in them, as in Arizona, the outline may be virtually, if not nominally, authoritative. At any rate, it is unquestionably of very great benefit.

State adoption of textbooks has the force of a specification of the nature and grade of work desired, if not required. It will be seen later that several of the States making no positive requirement yet exert a measure of control by at least prescribing that any instruction given shall follow a selection of approved texts.

With regard to important specifications, the following information was gained. In studying this summary it should be observed that the specifications are not, in the case of Georgia, State-wide requirements, for they are put forth in a State which leaves the study of music in general to local option. A distinction is therefore made between this State and those which require music in all schools and then further specify the nature of this required course. This distinction is marked by the words "Music required" or "Music not required." It should be remembered that music in the grades below the high school only is spoken of here:

California.—Music required. "Each county specifies the work required."

Georgia.—Music not required. The nature and grade of work, however, are specified "in those systems requiring" music at all. Features of these specifications are not reported.

Iowa.—Music required. "Elements of vocal music."

Kansas.—Music required. "Complete course specified." Features of the specifications not reported.

Louisiana.—Music required. The printed course of study is cited for detailed information. This may be summarized by saying that the requirements are those of any standard series of school music textbooks.

Maryland.—Music required. Breathing and phonic exercises and daily rote singing in first two years. "An occasional exercise for instruction following suggestions contained in song book" added in third year. From this year on the teacher is advised to follow a good textbook.

Oklahoma.—Music required. "Elements of music—vocal."

Utah.—Music required. The State course of study prescribes music, and "the use of the course of study is mandatory." [Details of the course in music not reported.]

Washington.—Music required. The printed outline in the course of study is cited for details. The requirements imply the following of regular sets of school music textbooks.

(5) Are "State adoptions" of textbooks made?

(6) If so, please give titles and authors of textbooks in music last adopted.

The number of States reporting that State adoptions of music textbooks are made is 10; the number of States reporting that State adoptions of music textbooks are not made is 35.

The 10 States reporting State adoptions are as follows: States in which music is required (in the grades)—Louisiana, Nevada, Oklahoma, Utah. States in which music is not required (in the grades)—Arizona, Idaho, Oregon, South Carolina, Virginia, West Virginia.

Among the 35 States in which State adoptions are not made are the following 6 remaining from the group which require music: California, Iowa, Kansas, Maryland, South Dakota, and Washington. Of these, Maryland and Washington have county adoptions.

To summarize: Of 35 States that do not have State adoptions 29 do not require music and 6 do require it; and of 10 States that have State adoptions 6 do not require music and 4 do require it.

The 2 States remaining, of the 47 reporting, probably do not have State adoptions. They are States that do not require music; and having reported music to be not required, they probably assume that this implies no prescription of texts. Had texts been prescribed, they would almost certainly have reported them.

The texts adopted, or put on an approved available list, by 9 of the 10 States following such a plan are in all cases standard and include all the more widely known series of books. The remaining

State of the 10—South Carolina—lists books on other subjects, but merely specifies "singing" in the place for music texts.

(7) Is music required in the high schools of the State? ...... If so, what is the nature and extent of the work required?

The number of States requiring music in high schools is 5; the number of States not requiring music in high schools is 42. It might be supposed that the 5 States requiring music in high schools would be among those requiring it in the grades, but this is not invariably the case. The 5 States requiring high-school music are Arizona, Indiana, Iowa, Louisiana, and Washington. Of these, Iowa, Louisiana, and Washington require music in the grades also (the only States making complete provision); Arizona and Indiana do not.

The following statement summarizes the situation: The States requiring music in the grades or in the high school, or in both grades and high school, are Arizona, high school; California, grades; Indiana, high school; Iowa, both; Kansas, grades; Louisiana, both; Maryland, grades; Nevada, grades; Oklahoma, grades; South Dakota, grades; Utah, grades; Washington, both.

That music should not be required in high schools, even though required in the grades, is not surprising in view of the lateness of its recognition, though the fact may be deplored; but that it should be required in high schools without requirement for earlier study in the grades needs explanation. This is found in a fact already commented upon, that music has reached a development in some States that do not require it that quite equals the development in States that do require it. A large number of quotations from the reports could be brought to the substantiation of this statement, which is well known independently to anyone acquainted with the facts. "Not required, but most schools have it," "Custom has made it mandatory," are typical of numerous statements made. With regard to both Arizona and Indiana, for example, the first has already been reported (under question 4) in just such a statement, and the writer knows the facts in Indiana to be that an unusually advanced program of music study is carried out in practically all the grade schools of the State. The prescription of a high-school course is therefore only the proper logical step to take toward further development.

Coming to the nature and extent of the high-school work required, we find the same conditions prevailing that were discussed in connection with this same inquiry as applied to courses in the grades. The specifications reported in the 5 States requiring music in the high schools are as follows:

Arizona.—Technical music; history of great composers and familiarity with their work.

Indiana.—One hour per week.

Iowa.—It varies. The statute provides only that the elements of vocal music be taught in all public schools.

Louisiana.—Two periods a week.

Washington.—State course. (Chorus practice, orchestra ensemble, and sight singing are the principal activities conducted under this course. The work, as shown by reports from a number of high schools, is very progressive.)

As with music in the grades, custom, public interest, and assistance and encouragement from State boards may produce a result equal to State-wide requirement. Reports from the high schools themselves, tabulated, but not thus classified, in the high school section of this report, show that high school work of quite as advanced an order as obtains in the "required" States is the rule in California, Illinois, Massachusetts (where harmony is a subject frequently reported), Michigan, and Minnesota. The work in California, as shown by these separate school reports, is the most advanced to be found in the United States, and from the proportion of schools reporting it, seems to be widely followed.

(8) Are special teachers or supervisors of music in the public schools required to pass examinations before receiving teachers' certificates?

(9) If so, kindly check below the subjects in which they are examined. (See questionnaire for these subjects.)

The broad statement may be made that regulations covering these points are in chaotic condition and are very unfortunate. The difficulty seems to be that the special subjects, having entered the schools lately, came after legislative enactment had taken place which did not foresee them. With no specific provision made in advance, it has followed that almost anyone could obtain a license to teach music under clauses that proclaimed merely that the applicant should "show fitness." If musical standards were higher and musical tradition of an advanced order were better established, such clauses would work but little harm. But where there has been no music whatever in a school, the local boards of education have little definite conception of the results that should be expected or of the qualifications necessary to a supervisor who would achieve such results. Consequently, a teacher may be employed who has merely a little local musical prestige as singer, pianist, orchestral player, or what not, and the weak and commonplace results that follow are ascribed to the weakness and undesirability of music itself as a subject for study in public schools.

It seems obvious that a teacher of music in our public schools should have a reasonably good general education (say of high-school graduate standard), should have made some study of education (psychology, pedagogy, history of education, methods, practice), and should be well educated as a musician. In short, he should be generally enlightened and should be prepared as a teacher and as a musician.

Persistently, however, some of these elements (sometimes all) are disregarded in bestowing licenses to teach. Naturally, great variety of evidence as to the possession of any of these qualifications must be allowed. Diplomas from high schools, normal schools, colleges, and other institutions may be accepted in lieu of examinations in general subjects; but if these are lacking, the general enlightenment of the applicant should be obligatorily tested by reasonably broad and searching examination, with the proviso that a certain number of years of conspicuously successful experience may be accepted instead. Certified courses in teachers' training schools, or normal schools, or normal departments, should similarly be rated as equaling examinations along pedagogical lines; but if these are lacking, examinations should be obligatory, unless, again, they are waived in view of, let us say, five years of notably successful experience. The same varieties of evidence with regard to ability along specifically musical lines should be demanded and accepted; but with all this diversity, the requirement of valid evidence of ability, of the three kinds stated, need not be lost sight of. Many cities have eligibility requirements that satisfactorily meet all these demands, and that make demands for good moral character and acceptable personality in addition. The State should at least be on an equality with any of its cities in this respect, and should be in position to lead and to guard those local systems that have met this responsibility less successfully.

The answers received are indicated in the statements here made. It should be stated in advance that failure to examine does not necessarily imply failure to ascertain by any means the qualifications of the candidate; also it should be borne in mind that these are State requirements, and may be added to locally.

Special teachers or supervisors of music are not obligatorily examined in 24 States. To these should be added Connecticut, Oklahoma, and Washington.

Connecticut reports: "State teachers' certificates are issued only upon examination." This is probably the same provision that Oklahoma makes. Oklahoma reports: "Examinations are provided for State certificates in this branch, though some cities do not require an examination." Washington reports: "Special certificates provided for those who show fitness."

Three States give no information.

The States requiring examinations (though with many qualifications as to credentials accepted in lieu of examinations) number 17.

Modifying statements with regard to these 17 States will be found in the report of answers received to the next two questions. Such statements, which weaken the force of the examination provision, when taken in conjunction with answers to the next two questions made by States classified as not requiring examinations, will be seen to bring the two groups far nearer to an equality than their separation here would imply.

When examinations are given, their subjects appear below under the 17 States classified as requiring examinations:

Arizona.—Elementary theory and sight singing; harmony; history of music, æsthetics of music, musical appreciation; voice; piano ("other instruments too"); methods, practice, material; history of education, pedagogy.

California.—English grammar; orthography; defining; methods of teaching; music.

Delaware.—[No specifications.]

Indiana.—Elementary theory and sight singing; harmony; counterpoint; history of music; æsthetics of music, musical appreciation; methods, practice, material. "One examination under heading of 'music.'"

Kansas.—"Required to hold regular teacher's certificate. No special examination required."

Louisiana.—Elementary theory and sight singing; harmony; history of music, æsthetics of music, musical appreciation; methods, practice, material; history of education, pedagogy; psychology.

Maryland.—A regular teacher's certificate is required by the provisions of the law.

Massachusetts.—"It (the school committee) shall select and contract with the teachers of the public schools, shall require full and satisfactory evidence of their moral character, and shall ascertain by personal examination their qualifications for teaching and their capacity for the government of schools; or in lieu thereof may accept the diplomas granted by the State normal schools of this Commonwealth to their graduates."

Michigan.—The question as to whether supervisors are required to be examined is answered: "Yes, or to have completed a satisfactory course." [The phases of a possible examination in music are not specified.]

Missouri.—For five-year special State certificates: Pedagogy; elementary psychology; literature; writing; physics; physiology; music.

New Jersey.—"An applicant for a special certificate to teach music must be examined in history of music, methods in music, and musical material used in schools, and must also file testimonials from two qualified teachers of music."

North Dakota.—Elementary theory and sight singing; harmony; history of music, æsthetics of music, musical appreciation; voice.

Ohio.—Elementary theory and sight singing; harmony; counterpoint; voice; methods practice, material; history of education; pedagogy; psychology.

Oklahoma.—Elementary theory and sight singing; harmony; counterpoint; history of music; æsthetics of music, musical appreciation; voice; methods, practice, material.

Pennsylvania.—Elementary theory and sight singing; methods, practice, material; history of education, pedagogy.

Wisconsin.—"If teacher has not the general qualifications, special license may be granted." [No details are given.]

Wyoming.—[No details of the reported required examinations are given.]

It is probable that some of these provisions apply only to State board examinations and are not required by the State in local examinations. A number of States report this plan, but are thereupon placed in the "not required" list. The plan may safely be assumed in additional States that did not specifically report it.

It is worthy of note that in Kansas a regular teacher's certificate is the requirement. This condition is found in degrees elsewhere (see Maryland, Massachusetts, and Wisconsin above) and is a sign of the fact commented upon some pages back, that certification of grade teachers was early provided for by law, and that special teachers, coming later, have had but little provision made for them.

Rhode Island reports: "They have to show certificate of preparation and training." This may be more properly an answer to Question 10.

(10) Are certificates from schools of music accepted in lieu of examination? ...... If so, what type of schools are so accredited?

(11) If neither examination nor a certificate is required, what qualifications must prospective supervisors of music show?

The answers to these two questions show that very great variety of evidence of fitness may be accepted. An adequate statement of the facts would require the presentation of an analysis of the laws of each State for the certification of teachers. The larger findings only can here be summarized.

Certificates from schools of music are reported as accepted in 27 States. The following four States are classified as not accepting such certificates:

Connecticut reports: "Such certificates not accepted by State." Presumably they may be accepted locally.

Indiana reports: "No; all applicants for licenses must have had certain required pedagogical courses or a minimum of one year in a recognized school of music."

Kansas, as has been seen, requires a regular teacher's certificate; hence music credentials alone are not accepted.

Tennessee answers negatively, but adds, in answer to question 11, "No specified qualifications."

The remaining 15 States do not answer directly on this point of accepting certificates from music schools. Answers that are of interest because of exceptional provisions made, or because they are typical, follow. Some of these are from States included in the 27 above grouped; others are from the group of 15 States not yet recorded.

Arkansas, Illinois, Maine, Massachusetts, New Hampshire, New Mexico, South Dakota, and West Virginia report that the requirements are left to local boards. This may be true of many other States not specifically so reporting.

California: "Must pass examination or show satisfactory credentials; e. g., normal or college degree, together with graduation from some school of music."

Georgia: "The law reads 'training in a specialty in the science and art of teaching.'"

Idaho: Credits "Boston Conservatory; universities having special music departments."

Iowa: "The two-year course in public-school music at the Iowa State Teachers' College and similar courses in several other Iowa colleges are accredited."

Kentucky and Mississippi answer "None" to the question, "What qualifications must prospective supervisors show?"

Missouri accepts certificates from standard schools of music "in lieu of part of the examinations" only.

Louisiana, Michigan, Minnesota, and New York report that they credit courses in institutions when these courses provide at least two years' work beyond the high school, or are in normal schools approved by the State superintendent.

Montana accredits "musical departments of State normal schools" and some private schools.

New Jersey accepts like certificates "when State in which schools are located accepts them."

Nevada accredits "any standard music school."

Oklahoma reports "various types" of schools as being accredited.

Wisconsin credits schools "looked up by the board of examiners and found to be adequate."

(12) Is an examination in music included in the requirements for a grade teacher's certificate?

(13) If so, what does the examination include beyond rudiments of music?

The first of these questions is of supreme importance. The report from public-school systems gives conclusive evidence that in the overwhelming majority of school systems the grade teachers carry on the work in music under the direction of a supervisor. This being the case, success is necessarily dependent upon the musical knowledge of the grade teacher. The answers here received do not augur well for such success.

The number of States reporting that an examination in music is not required of grade teachers is 36; the number of States reporting that an examination in music is required of grade teachers is 4.

The following qualifying statements apply to States included in the first group (not requiring examinations):

In four of these States the grade teacher must be examined in music if the subject is locally required.

In Arizona examination is not required, "but employment may depend on it."

New Jersey makes music an elective subject for a permanent certificate.

Wisconsin reports: "No; except where teacher is a graduate of a normal school. All normal schools have music in their courses (usually 20 weeks)."

The four States reporting affirmatively as to examinations for grade teachers are California, Iowa, Kansas, and North Dakota. Kansas qualifies her answer by the words "for State certificates and higher grades of county certificates," and North Dakota specifies "only for primary certificates."

In answer to the question as to what the examination includes, six States report "rudiments only," or "not much beyond the rudiments." The six are California, Kansas, Minnesota, Nevada, Oklahoma, and Pennsylvania. New Jersey, in addition to this provision, includes methods, song material, teaching of rote songs, care of child voice, treatment of monotones, and other like topics.

California reports: "Rudiments only; but we have few teachers from examinations; 85 per cent are normal or university trained."

North Dakota reports "a thorough knowledge of the subject" as required in the examination.

(14) By what means, if any, is the efficiency of the instruction in music in the public schools of the State ascertained?

TABLE 28.—*Efficiency of instruction in music in public schools ascertained.*

	States.
Not at all (by State means)	21
No answer	17
"Comparison" (Arizona)	1
By high-school inspectors (Indiana, Missouri, North Dakota)	3
By occasional reports (last one in 1905) (Massachusetts)	1
"A department of the State teachers has been formed looking toward this end" (New Hampshire)	1
By reports from local authorities (New York)	1
By the union superintendents (Vermont)	1
"Only in a general way through the superintendents" (Wisconsin)	1
Total	47

(15) By what means is such instruction encouraged?

Arizona.—"By contests at the university, where medals are awarded."

California.—"Normal schools give courses; university also; numerous special teachers; many institute conductors; by county superintendents."

Florida.—"Frequently by having a music teacher work independently in a room near the public school."

Georgia.—"Through the example of the larger systems."

Illinois.—"Knowledge of music is required by many school boards. The five State normal schools require courses in music for graduation."

Iowa.—"The music teachers' section of the Iowa State Teachers' Association has been effective in raising the standard of instruction in music in public schools."

Kansas.—"Through official course of study for graded schools, high schools, and normal institutes."

Louisiana.—"None, except special teachers of music in high schools." (This State, however, requires that music be taught in grades and high schools.)

Michigan.—"The demand for the work."

Missouri.—"By strongly recommending in course of study."

Nebraska.—"Only by local authorities."

New Hampshire.—"Almost all towns of any size maintain special teachers of music. All cities do so."

New Jersey.—"Normal schools and summer normal schools."

New Mexico.—"Outlines in institute manuals and courses of study for common schools. At teachers' meetings."

New York.—"Allowance of teacher's quota for the employment of special music teacher."

Ohio.—"By the public, boards of education, and the superintendent. The sentiment for music is very pronounced."

Oklahoma.—"By propaganda from supervising school officials."

South Dakota.—"The law in this State has done little to promote the teaching of music in the public schools, since it provides that no teacher shall be refused a certificate because of inability to pass an examination in music."

Tennessee.—"It receives but little encouragement in this State."

Vermont.—"Union superintendents."

Virginia.—"Frequent public gatherings of school patrons and others, at which the more skilled pupils sing or play. Its popularity is attested by the fact that there are 38,824 pupils studying music in Virginia—31,177 in cities and 7,647 in counties."

Washington.—"Credit allowed on high-school diplomas."

West Virginia.—"Work in music is definitely outlined for primary grades in State course of study."

Wisconsin.—"In general through institutes, meetings, etc., held by superintendents."

The remaining 23 States reporting returned no answer.

(16) Are State specialists or supervisors of music employed? ...... If so, how many?

None are employed in 42 States; 5 States make no answer.

(17) Is music taught in reformatory institutions?

TABLE 29.—*Music in reformatory institutions.*

	States.
Not answered	17
Music not taught	5
"It is to become a feature of teaching there" (Arizona)	1
No special requirement (New Jersey)	1
"Have none in the State" (Nevada)	1
Music "only for morning exercises," etc. (Tennessee)	1
Music taught	21
Total	47

The 21 States reporting affirmatively are as follows: Idaho, Illinois, Iowa, Kansas, Kentucky, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, New York, North Dakota, Ohio, Oklahoma, Rhode Island, Vermont, Virginia, Washington, West Virginia, Wisconsin.

Ohio answers, "Yes, and with good effect."

REPORTS FROM PORTO RICO, THE PHILIPPINES, AND HAWAII.

The reports from Porto Rico, the Philippines, and Hawaii, have been reserved for the conclusion of this review. They are here given in full, the questions omitted being only such as received no answers. Such failure to answer is usually due to the questions being pointless in the light of other answers made, or to their inquiring about features which are not present at all in the system reported. In this latter case failure to reply is usually equivalent to a negative statement. Reference to the complete questionnaire printed at the beginning of this section of our report will make this clear.

Porto Rico.

1. Is music required in the public schools in grades below the high school? No.
3. If not, was it required at any time in the past? No.
5. Are "State adoptions" of textbooks made? No.
7. Is music required in the high schools? No.
8. Are special teachers or supervisors of music in the public schools required to pass examinations before receiving teachers' certificates? No.
12. Is an examination in music included in the requirements for a grade teacher's certificate? No.
16. Are State specialists or supervisors of music employed? No.
17. Is music taught in reformatory institutions? No.

The Philippine Islands.

1. Is music required in the public schools in grades below the high school? Yes; in all grades.
2. If so, how long has it been required? For more than 10 years.
4. Do the requirements specify the nature and grade of work required. Yes.
   If so, what are the important specifications? In all grades from 3 to 5 days' work each week, periods ranging from a few minutes to 20 minutes, following the regular school vocal course, from published charts, texts, and songbooks.
5. Are "State adoptions" of textbooks made? Yes.
6. If so, please give titles and authors of textbooks in music last adopted.

Standard course of study in vocal music for the public schools of the Philippine Islands. 1906. Rev. 1910. (Bureau of Education Bull. 23.)

Primer of vocal music, by Eleanor Smith (Modern music ser.). Silver, Burdett & Co.
First book in vocal music, by Eleanor Smith. (Modern music ser.) Silver, Burdett & Co.
Second book in vocal music, by Eleanor Smith. (Modern music ser.) Silver, Burdett & Co.
Abridged academy songbook, by C. H. Levermore. Ginn & Co.
American songbook. Orville Brewer Pub. Co.

Alternate third book of vocal music, by Eleanor Smith. (Modern music ser.) Silver, Burdett & Co.

Beacon song collection, by H. Griggs. Silver, Burdett & Co.

7. Is music required in the high schools? Yes.
   If so, what is the nature and extent of the work required? Continuing the work of the elementary schools.
8. Are special teachers or supervisors of music in the public schools required to pass examinations before receiving teachers' certificates? No special music examination.
16. Are State specialists or supervisors of music employed? Yes; perhaps a half dozen might be so called.
17. Is music taught in reformatory institutions? The Government maintains none.

The strength of these provisions deserves far more than passing notice. Few States of our own land have better regulations. They are in harmony with the spirit of the people, who are fond of music and, among the better classes, well acquainted with its literature. Many will remember the Philippine band which played at the World's Fair in St. Louis. Manila also maintains a symphony orchestra of 70 players, practically all of whom, if the names are taken as evidence, are Spanish. Their first program for the season of 1912–13 included the Overture to Der Freischutz, Dvorak's New World Symphony, and other numbers which, like these, place the program on a level with those familiar to patrons of our own greatest orchestras. If the account were not foreign to our present purpose, much of great interest might be quoted from the booklet issued by this orchestra. The aim is educational and the labor unselfish. A long list of instruments that have been contributed to it by loyal supporters appears on one page. A list of the compositions in its library is also given, and presents a most commendable repertoire. Most of these compositions, says the foreword, "have been generously presented," and we find "The Orchestra" itself credited with the presentation of 12 numbers, the Monday Musical Club with 7 numbers (the Beethoven symphonies, third to ninth, inclusive), and several individuals with the remainder. Some idea of the interest and spirit of members and patrons may be gained from these facts.

Territory of Hawaii.

This report is transcribed in its entirety. It is recommended to the earnest attention and cordial good graces of all interested in the promotion of musical progress. No other report received among those from State departments describes so thorough and efficient a plan of organization and administration. Its place at the end of the series is appropriate, for it may be justly regarded as an exemplar which our various States might well endeavor to approach.

1. Is music required in the public schools in grades below the high school?—Yes.
2. If so, how long has it been required?—Since 1897.
3. If not, was it required at any time in the past?—[No answer.]

4. Do the requirements specify the nature and grade of work required?—Yes.
   If so, what are the important specifications?—Begin with rote songs, then continue with song singing and sight reading in tonic sol-fa and staff notation (Grades I-IV). Chorus work (Grades V-VIII). Special attention to ear training and tone production throughout the grades.
5. Are "State adoptions" of textbooks made?—Yes.
6. If so, please give titles and authors of textbooks in music last adopted.—Tonic Sol-Fa I, II, III (Batchellor) Silver Song Series (Silver Burdett Co.); Educational Reader (Ginn & Co.); Laurel Music Reader (Birchard & Co.); Songs We Like to Sing (Ginn & Co.); and supplementary music.
7. Is music required in the high schools?—No regular course.
   If so, what is the nature and extent of the work required?—[No answer.]
8. Are special teachers or supervisors of music in the public schools required to pass examinations before receiving teacher's certificates?—Yes.
9. If so, kindly check below the subjects in which they are examined:
   Elementary theory and sight singing.—Yes. Harmony.—Yes. Counterpoint.—No. History of music, æsthetics of music, musical appreciation.—Yes. Voice.—Yes. Piano.—Yes. Methods, practice, material.—Yes. History of education, pedagogy.—Yes. Psychology.—Yes.
10. Are certificates from schools of music accepted in lieu of examination?—Yes.
    If so, what type of schools are so accredited?—Schools and colleges which give courses in public-school music.
11. If neither examination nor a certificate is required, what qualifications must prospective supervisors of music show?—[No answer.]
12. Is an examination in music included in the requirements for a grade teacher's certificate?—It is.
13. If so, what does the examination include beyond rudiments of music?—Individual sight reading, ear training, song interpretation, elements of harmony, and methods.
14. By what means, if any, is the efficiency of the instruction in music in the public schools ascertained?—By close supervision.
15. By what means is such instruction encouraged?—Teachers' classes, summer school, supervision.
16. Are State specialists or supervisors of music employed?—Yes.
    If so, how many?—Three or four.
17. Is music taught in reformatory institutions?—Yes.

Provision for high-school music is all that is lacking in this report. The replies to questions 4, 8, 9, 12, and 13 are of especial interest and value. No one can justly maintain that these provisions are unreasonable or impracticable, or are, indeed, anything but sensible and efficient. Such provisions should unquestionably be included in the laws of every State. They represent competent legislative direction of a phase of education that is now here in stalwart proportions, and that but for lamentably tardy legislative and scholastic understanding and provision would long since have taken its place as one of the strongest and most desirable elements in our educational system instead of being what, through neglect, it now often is, an alien activity, without standards and achieving strange and unworthy results.

REPORT OF NEBRASKA STATE MUSIC COMMITTEE.

Special attention is called to the report of the Nebraska State music committee, abstracts from which are given herewith. This report represents a notable advance in provision for musical education, and is deserving of the most careful and sympathetic study.

REPORT OF THE NEBRASKA STATE MUSIC COMMITTEE TO THE UNIVERSITY OF NEBRASKA AND THE DEPARTMENT OF EDUCATION.

MUSIC COURSES.

The following courses are presented for high schools having competent instructors in music:

COURSE I.

Chorus singing must include the instruction necessary for correct part singing, interpretation, and the principles of correct voice production to be taught incidentally. Two periods a week with a program each semester requiring at least four hours of extra work, including the rendition of the program. Pupils less musical should be required to do some home practice. Credits, one-fourth each semester. Total credits possible, two.

COURSE II.

Band or orchestra on same basis as chorus. Total credits possible for both combined, three.

COURSE III.

Special orchestral course.—Because orchestra ensemble is so valuable in music education, it being susceptible of the highest artistic development of any kind of music that can be performed in high schools, and since a good orchestra is such a valuable organization in raising the artistic standard and in creating and fostering school spirit, this special course is offered. Players in the orchestra who are taking one private lesson of 30 minutes each week and one lesson in appreciation may substitute two hours, 120 minutes, of prepared orchestral ensemble each week in place of theory and harmony to earn one credit each semester. Total credits possible, six. This course must not be taken unless the instructor be a special orchestral conductor who thoroughly understands stringed instruments and has had considerable experience in orchestral work. The private lessons of this course are under the same regulations as those in applied music in Course V.

COURSE IV.

Music appreciation study may be based upon the course for high schools by Anne Shaw Faulkner, published by the Victor Talking Machine Co. "Appreciation of Music," by Thomas W. Surrette and D. G. Mason, published by the Hamilton W. Gray Co., New York City, and Baxter Perry's "Analysis of Famous Piano Compositions" are valuable contributory material. Local artists and mechanical musical instruments should be used in giving this course. Also the private students who are well advanced should give some of the selections. The work of this course is to study the form and structure of different kinds of music, to learn the leading composers and become familiar with many of the famous compositions, to study styles of various artists by means of the talking machine, and to get a definite idea of good interpretation. Credit, one-fifth each semester. This course is open to anyone, whether he is taking other music work or not. It is required of every one who takes credit for private study.

COURSE V.

Applied music.—Private lessons in piano, organ, voice, or principal instrument of the symphonic orchestra (violin, viola, cello, flute, clarinet, cornet, or trombone), studied outside of school, may be credited as follows: Two lessons of 30 minutes each, or the equivalent, per week with a private teacher, a minimum preparation of three hours being given each lesson. If one lesson of 30 minutes is taken, the minimum preparation should be four hours. Each student receiving credit for private instruction must also take two lessons each week in theory and harmony and one lesson each week in musical appreciation, all lessons requiring preparation. Credits, one-fifth for each lesson each semester. Total credits possible, two each year.

If only one lesson per week is taken privately, the complete credit will be four-fifths each semester and the additional fraction may be secured in one of the other music courses.

[NOTE.—No school should attempt to give credit in private music work unless the theory and harmony and appreciation can be taught in the school regularly by a competent instructor.]

Private work must be examined either at the end of the year or at the end of each semester by an impartial and competent examiner. The private teacher must report quarterly to the high-school principal, stating the technical work required during the quarter, giving the scope and quality of the pupil's accomplishment, giving a list of the compositions studied, defining the extent to which the study was carried, and indicating the proficiency of the pupil by a grade as used in the high school. These reports are to be made in duplicate on blanks provided by the school. One report shall be signed by the teacher, the other left unsigned. The unsigned copies shall be the basis for the examination.

Before a pupil is accepted for credit in private lessons his parents or guardian should agree to see that the proper amount of practice is performed by the pupil. The private teacher should cooperate with the school in securing adequate results. The examiner should refuse to give credit to any student whose work is below standard.

COURSE VI.

Theory and harmony may be given in classes twice each week. It should comprise work equal to the scope of the theory work in the "Progressive Series," by Godowsky, published by the Art Publication Society of St. Louis, or it may follow the work as taught by any standard conservatory of music.

It is recommended that the "Progressive Series" of piano lessons mentioned above should be made the basis for the piano instruction, or that the course be equal to that series in comprehensiveness and system.

GENERAL REGULATIONS.

Few high schools should attempt to carry out all these courses, but should center their efforts on the courses that can best be handled and that best serve their interests.

Each school offering music credits for graduation should provide the high-school inspector a complete synopsis of the work offered.

No student may receive more than eight credits in music.

All who register for credit in piano or violin during the year 1914 must have had at least one year's work of not fewer than 40 lessons.

After 1914 all who register for credit in piano or violin must have had at least two years' work of not fewer than 80 lessons. This is intended not only to raise the standard of work for private music study and to place the quality of the music work on an equal basis with other high-school subjects, but to emphasize the fact that one who has not had considerable training in piano and violin before the high-school age can not hope to accomplish much in music.

COURSES FOR TRAINING TEACHERS OF MUSIC.

In investigating the opportunities offered for the training of teachers of music the following questionnaire was used:[1]

QUESTIONNAIRE.

1. Is a course offered for training teachers of music?
2. If so, how many years are required to complete that course?
3. Is the course designed for the instruction of grade teachers or for the training of supervisors of music?

4-A. Synopsis of course in music for grade teachers.
4-B. Synopsis of course for training supervisors.

5. What degrees are conferred?
6. Are summer courses offered?
7. Does the school provide night classes?

In all, 164 institutions divided among 42 States are included in the subjoined report. These institutions are State normal schools, private normal schools, and city training schools. Included among the State normal schools are many county normal schools, of which latter class Wisconsin and Michigan especially report a number.

Included among the city training schools and private normal schools are six kindergarten schools. As the training in music of prospective kindergarten teachers is of very great importance, such answers as were given were included in the tables wherein they receive special designation.

With these qualifications the division among the three classes of schools reporting is as follows: Number of State normal schools, 106; number of private normal schools, 46; number of city training normal schools, 12; total, 164.

QUESTIONS AND ANSWERS.

The provisions in general made by these schools for training teachers of music are set forth in Table 30, which covers the following questions:

(1) Is a course offered for training teachers of music?
(3) Is the course designed for the instruction of grade teachers or for the training of supervisors of music?

---

[1] Main topics only are given.

TABLE 30.—*Number of schools and provision of courses.*

Courses.	State and county schools.	City training schools.	Private normal schools.	Total.
No music courses offered	[1] 12	3	19	34
Courses for instruction of grade teachers	60	8 [2] 1	13 [2] 5	87
Courses for training supervisors of music	3	....	3	6
Courses for both grade teachers and supervisors	31	....	6	37
Total	106	12	46	164

[1] Six State and six county.

[2] Kindergarten schools.

It will be observed that a number equal to 20 per cent of all these schools, the business of which it is to prepare at least the grade teacher for work, offer no training in music whatever. Three of these schools are city training schools in cities which include music among the subjects regularly taught in the grades. One of these latter, however, reports that the question "is now under discussion by a special committee appointed by the board of education."

Of the 164 institutions, 43 make some provision (the nature of which will be seen later) for the training of supervisors of music. While the city training schools, the kindergarten schools, and the county normal schools that are included in the 164 could not be expected to make such provision, this number is yet too small in relation to the almost universal demand for music in our public schools. Only 34 State institutions out of 87 (omitting 19 county normal schools), or, roughly, about two-fifths, make provision for training supervisors of music. As a result, our supervisors are trained in private music schools or under private music teachers as musicians rather than as teachers, or are trained in normal schools as teachers rather than as musicians. A judicious balance in these two phases of training is urgently needed; and the normal schools, with their institutional strength, their corps of affiliated music teachers, and in connection with their present offerings of instruction in music for grade teachers could more readily than any other agency undertake and successfully carry forward such courses.

(2) If a course for training teachers of music is given, how many years are required to complete that course?

As two possible courses are under investigation, the answers to this question are divided into two tables. In connection with the courses for grade teachers, it was found that the year was too large a unit of measurement for a number of schools. This will be noted in the terms of the table following.

The presentations in these tables are of only general value. The number of years during which a course is run is but a slight guide as to its strength, since the number of weeks in the scholastic year, and—a matter of far greater importance—the number of hours a week given to the subject are the real determinants. These features are reported in detail in later tables. Further, the answers were made often to apply to the length of the entire normal course within which some study of music was included; and the uncertainty resulting could not always be cleared away by resorting to the later detailed answers. Where the indefiniteness was beyond solution, no tabulation was attempted; and this accounts for totals in these tables that are below the number of schools reporting courses in music of some nature and length.

TABLE 31.—*Length of course for grade teachers in schools reporting.*

Length of courses.	State and county normal schools.	City training schools.	Private normal schools.
Ten weeks	3		
Twelve weeks	4		[1] 2
One-half year	18		2
One year	28	[1] 1	[2] 7
One and one-half years	4		1
Two years	31	7	[1] 5
Two and one-half years			1
Three years	3		1
Four years			1
Five years			
Total	91	8	20

[1] One kindergarten training school.

[2] Two kindergarten training schools.

The attention given to music by city training schools is deserving of notice and all praise. In the section of this report dealing with music in high schools, it will be found, further, that many city high schools require strong courses in music for prospective teachers. A plan that includes both of these provisions must prove to be highly effective.

TABLE 32.—*Length of courses for supervisors in schools reporting.*

Schools.	Length of course.								Total.
	½ year.	1 year.	1½ years.	2 years.	2½ years.	3 years.	4 years.	5 or 6 years.	
State normal schools		5	1	16		8	3	1	34
Private normal schools	1			3	1	1	2		8
Total	1	5	1	19	1	9	5	1	42

4-A. Synopsis of course in music for grade teachers.

Reference to the questionnaire will show that not only was a statement requested of the branches taught, but that, further, the inquiry was directed toward ascertaining the number of weeks and the number of hours a week given to each branch, together with the textbooks used in each. For convenience these data are separated into two tables, the first of which records only the provisions made for teaching the subjects named to some extent. The comparative strength of these provisions is a presentation reserved for the second table.

TABLE 33.—*Branches taught in the courses in music for grade teachers.*

Branches taught.	State normal schools.	City training schools.	Private normal schools.	Total.
Elementary theory and sight singing	91	7	19 [1] 2	117 [1] 2
Ear training, dictation, and melody writing	61	3	10 [1] 1	74 [1] 1
Biography of musicians, history of music, æsthetics of music, and musical appreciation	47	1	10 [1] 1	58 [1] 1
Methods, theory, and practice	60	5	12	77
Voice management (class instruction)	56	3 [1] 1	12 [1] 2	71 [1] 3
Practice teaching	[2] 49 1	5	7	[3] 61 1

[1] Kindergarten. [2] 49 required; 1 optional. [3] 61 required; 1 optional.

Consultation of Table 30 shows that 124 schools in all reported courses for grade teachers (among them 6 kindergarten schools). In the present table it is seen that no one of the subjects is maintained in all of these schools without exception, though naturally so fundamental a branch as elementary theory and sight singing is offered in almost all.

Further comparative study of the two tables reveals that the five schools not now reporting work in elementary theory and sight singing are classified as follows: One city training school, one city kindergarten training school, three private kindergarten schools. That a kindergarten school should ignore the rudiments of music is not so serious, it may be admitted, as that a school for grade teachers should do so; but it is still an unfortunate omission. On the other hand, the kindergarten schools, comparatively, place more stress on teaching voice management. This subject certainly, because of its importance in kindergarten practice, both in point of the amount of time given to singing and because here the child forms his first vocal habits, deserves all the place accorded it and very much more, for three out of six kindergarten schools here recorded do not report any such activity. That more extended inquiry would reveal more of such shortcoming will be the presumptive opinion of almost all supervisors of music who have observed widely the nature of the vocal practice of many kindergarten children, or who have become aware of its results in first-grade singing. With study of the child's voice as a principal branch, the other branches could then follow advantageously to whatever extent circumstances permitted.

Ear training, dictation, and melody writing are given far more attention, it will be noted, than they receive in public-school music teaching. This gives encouraging outlook for future activity of the kind in the public-school grades.

The study of methods, it would seem, should be a constant feature; yet it is reported in but approximately two-thirds of the schools. Practice teaching, also, which would be of inestimable value, is not accorded its rightful place, being a feature in but a few more than half of the reported courses.

The next table summarizes the results of an attempt to estimate the strength of the courses in music provided for prospective grade teachers.

The principles and standards maintained in forming the estimates need to be carefully reviewed before the table itself is studied.

The first problem was to reduce to some common terms courses of great diversity. This diversity was manifested in at least five ways; namely, (1) in the number of subjects; (2) in the length of the course (number of hours in all); (3) in the choice of subjects where some were omitted; (4) in the comparative emphasis accorded one subject or another; (5) in the delimitation of each subject as conceived in one school or another. Almost every conceivable variety of combination and proportion between these factors was found in surveying all the reports; and the problem was therefore to reduce to equal terms things that were themselves diverse in kind, though not, perhaps, so diverse in general educational outcome. To have done this to a finality would have necessitated reduction to a classification of "weak," "fair," "strong," or some such terms, which would have seemed arbitrary. A dual ranking was therefore given each course with respect to (*a*) the total number of hours accorded, (*b*) the comprehensiveness of the whole course. The relative desirability of the intensive and extensive plans is not here adjudged. Probably in different localities such relative desirability varies; and so the facts are given and left to the reader's judgment. It should be stated in addition, however, that before a course was classified, as to its breadth (for instance), a careful study was made of all details of the report; and the scope given each subject as revealed by the textbooks, by additional statements made, or by evidence of other kinds, was carefully measured. Similarly with respect to the number of hours given, care was exercised against doubling hours in case of subjects combined (as sight singing and dictation), and in determining the total time as dependent upon the length of the "hours," which in some few schools were 30-minute periods, while in others not the number of school periods but instead the number of full 60-minute hours was reported. Fortunately, the reports were made in such detail that a reasonably exact classification was possible.

The grading of courses in the table rests, then, upon the following standards:

Time given to the whole course.

A. 144 hours, approximately, as a minimum; equaling 72 weeks, 2 hours (45 minutes or more) a week.
B. 100 hours, approximately, as a minimum; same standards.
C. 75 hours, approximately, as a minimum; same standards.

Number of branches constituting the course.

1. Includes five or all six subjects
2. Includes two to four subjects..
3. Includes one subject only.....

With careful consideration of textbooks, combinations of subjects, etc.

A1 would therefore be the strongest possible course, rich in content and adequate as to time. Many of this group exceed considerably the 144 hours minimum standard adopted for it.

A3 might be a very good course because of its thorough study of one fundamental subject, such as elementary theory and sight singing.

C1, although high in the numerical ranking, would be unfortunate, for the greater the number of subjects the less favorable would prove so short a time as is represented by C. Unless a certain amount of earlier preparation in music is implied in case of the C1 plan, indeed, C3 might be better: but doubtless C1 does often imply such high local standards, while C3 may probably imply an average musical knowledge so limited as to demand concentration on essential rudimentary features in the limited time at command.

It is readily seen that in general the element of time is more important than that of breadth of the course; or, in other words, that high letter ranking, in this table, is superior to a good number ranking.

TABLE 34.—*Courses in music for grade teachers—Time given and number of branches included.*

Courses.	State normal schools with—			City training schools with—			Private normal schools with—		
	5 or 6 subjects.	2 to 4 subjects.	1 subject.	5 or 6 subjects.	2 to 4 subjects.	1 subject.	5 or 6 subjects.	2 to 4 subjects.	1 subject.
Course A given by..........	20	12	1	1	3	1	4	6	....
Course B given by..........	8	13	10	....	....	2	....	4	2
Course C given by..........	3	4	19	....	1	1K	....	3	2 and 5 K[1]

[1] Kindergarten.

A careful study of this table will lead to the conclusion that normal schools do not yet recognize music for the grade teachers as fully as the practice in public schools warrants. Adequate time is given grudgingly, and the courses are frequently diffuse and overambitious for the meager time allotted. It must not be forgotten, too, that a considerable number of schools (20 per cent) reported that they provided no instruction in music for the grade teacher. Conditions that are not reported here, if taken into account, would put the matter in a worse light rather than in a better. For instance, one excellent normal school, far above the average, and with a large number of students, which reports a good course for grade teachers, yet schedules this course altogether for its first and second years. High-school students are admitted to the third or junior year without examination. For almost all subjects except music this plan would not prove harmful, but high-school music is so little standardized that nothing can be predicated of a person's musical knowledge from the mere fact that he is a high-school graduate. Consequently, to the distress of the dean of the department of music in this particular normal school, hundreds of students enter ignorant of music and are permitted to graduate without studying any branch whatever of the subject. Optional classes in music are features of many other normal schools, and there is little agreement as to standards. The tables herein given are therefore probably more favorable—not less favorable—than the facts warrant. When the reports from grade schools are studied in relation to the reports from normal schools, the conclusion is unavoidable that music, like many other branches, has entered the curriculum from below rather than from above, and will secure recognition in the higher institutions of learning only when this popular demand has grown to such proportions that it can no longer be ignored or resisted.

(4–B) Synopsis of course for training supervisors.

The tabulation of the reports for 4–B is made in two sections, as was just done with the reports for 4–A, and for the same reasons. The first table, then, merely gives the number of schools reporting each subject. City training schools, of course, make no such provision, and therefore disappear from these tables.

TABLE 35.—*Branches taught in the courses for training supervisors of music.*

Courses.	State normal schools.	Private normal schools.
Elementary theory and sight singing	34	7
Harmony	34	8
Counterpoint and composition	15	3
Instrumentation	12	4
History of music, æsthetics of music, and musical appreciation	34	8
Voice	27 [1]3	7
Piano	20 [1]2	4
Conducting	27	5
Methods	34	5
History of education, pedagogy, and psychology	30	5
Practice teaching	28	4

[1] Private lessons.

Reference to an earlier table shows that the total number of State normal schools reporting courses for training supervisors was 34; of private normal schools, 9. One of the latter group did not report in detail, in the present table, the nature of the courses offered.

The table is worthy of detailed study. Attention is called to the fact that, of the private normal schools reporting on the present question, the maximum number concur only in point of two subjects, while the State normal schools all concur in point of four subjects. The choice of subjects in this respect is also interesting.

In the Bloomsburg (Pa.) State Normal School, French and German, besides 8 of the 11 subjects listed in the table, are required.

Piano study is required in several schools that do not themselves provide such instruction. These are counted, however, as including piano in their courses.

One school, a Roman Catholic school for the training of choirmasters and instructors in parochial schools, provides a strong course in organ playing.

The next table, which classifies the courses as to strength in point of time given and breadth of study, presents the same difficulties that were met with in making the corresponding table in connection with courses for grade teachers. All that was said there as to these difficulties and the manner of meeting them could be repeated in equally good application here, and may be needed as reference in connection with study of this table.

The terms of the present classification are as follows:

Time given to the whole course.

A. 1,000 hours minimum, approximately.
B. 800 hours, approximately, to 1,000 hours.
C. 700 hours, approximately, or less.

Number of branches constituting the course.

1. Eight or more subjects.
2. Five, six, or seven subjects.
3. One, two, three, or four subjects.

TABLE 36.—*Courses for training supervisors of music—Time given and number of branches included.*

Courses.	State normal schools with—			Private normal schools with—		
	8 or more subjects.	5 or 7 subjects.	1 to 4 subjects.	8 or more subjects.	5 to 7 subjects.	1 to 4 subjects.
Course A given by	14	....	....	4	....	....
Course B given by	6	3	....	1	1	....
Course C given by	4	6	1	1	1	....

The table shows, compared with the corresponding table for grade teachers, a right regard for greater breadth of training. The supervisor of music touches music from many sides, and this has not been lost sight of in provisions made in many normal schools. The proportion of schools classified as A1 is highly gratifying; and some of the courses of study reported in this group are so intelligently and conscientiously planned that one can think of nothing that could add to their value. The small number of schools offering such courses is the one discouraging circumstance. Of 147 State and private normal schools reporting (this number omits kindergarten and city training schools), only 43 offered courses for supervisors. Of these a goodly proportion (18) offer courses that must be ranked as A1, and few of the remainder are below a sound medium of efficiency; but the disquieting fact remains that the 147 schools are reduced to so low a number as 43, when the training of supervisors is considered. The attention given the subject in the public schools warrants better provision than this on the part of the normal schools.

(5) What degrees are conferred?

Four State normal schools alone report that they confer degrees. These are classified as follows: One, bachelor in music and pedagogy; one, bachelor of pedagogy; one, bachelor of arts, after bachelor of pedagogy; one, bachelor of music.

In addition, three State normal schools make note of the fact that they issue special diplomas. Two private normal schools also state that they issue special diplomas. One private school issues a diploma to organists.

(6) Are summer courses offered?

The following table summarizes the result of this inquiry:

TABLE 37.—*Summer courses.*

	Supervisors' courses only.	Grade teachers' courses only.	Both.
Number of State normal schools offering	1	18	20
Number of private normal schools offering	....	4	3

Reference is again made to facts presented in earlier tables and discussions. The figures just given must be considered in relation to at least 147 State, county, and private normal schools that might reasonably be expected to provide instruction in music for either grade teachers, supervisors, or both, and in either regular or summer sessions, or both. Of these, 91 were State or county normal schools that offered courses for grade teachers, and the 38 schools of this class now tabulated as offering summer courses constitute 41.7 per cent of these 91 schools. Again, 34 of the State normal schools (106 reporting) offer courses for supervisors, and 21 of these, or nearly 62 per cent, offer similar courses in the summer weeks. Similarly, 19 private normal schools were found to offer regular courses for grade teachers, and 7 of these extend this offering in summer courses; 9 private normal schools offer courses for supervisors, and 3 of these offer the same courses in summer terms.

The conclusion is that the normal schools that offer music at all, though they are a small percentage of the whole, are increasing their influence greatly by making, to such a liberal extent, provision for summer courses. Indeed, until many schools make adequate provision for strong courses during the regular scholastic year, these summer courses offered by the few must constitute one of the chief resources for the ambitious teacher of music.

(7) Does the school provide night classes?

Only one school, namely, the Western Kentucky State Normal School, Bowling Green, Ky., answered this question affirmatively. One other, the State Normal School at Chadron, Nebr., replied, "Would, if they were called for." So far as the training of supervisors is concerned, but little demand for night classes could be expected; but for grade teachers it would seem that city school systems might advantageously maintain such courses, or see that they were maintained, either in the public night school system or in a local university or normal school, if any such institution existed.

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LIBRARY INSTRUCTION IN UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS

COMPILED BY

idgely
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LIBRARY INSTRUCTION IN UNIVERSITIES, COLLEGES, AND NORMAL SCHOOLS.

INTRODUCTION.

The importance of instruction in the use of books, bibliography, and library economy is recognized by institutions of higher education in the United States. In many of the universities, colleges, and normal schools of the country prescribed courses are given in the book arts and bibliography. In the year 1881 Mr. R. C. Davis, librarian emeritus of the University of Michigan, succeeded in having a course in bibliography and reference works made a part of the curriculum of the University of Michigan. The efforts of Mr. Davis gave a great impetus to the general movement for bibliographical and library instruction in colleges and universities. Brown University in 1902–3 offered a course in bibliography, which in recent years has been discontinued, owing to pressure of other duties on the part of the professor of bibliography, who is at the same time librarian of the university. Yale University has a course in the bibliography of history, which is required of all students before further courses in history can be taken. This course has been found productive of an excellent training for advanced college work.

In cooperation with the legislative reference department of the Wisconsin Free Library Commission, the library school of the University of Wisconsin offers a special course of training for legislative and municipal reference work and the various sociological phases of library service. The interest in bibliographical work is undoubtedly increasing, but as Mr. Willard Austen, of Cornell University, remarks:

> At none of our collegiate institutions, except at those where library school courses were open to the general student body, can a student get instruction in all the subjects that go to make up a well-rounded course in bibliography for the general literary worker.[1]

Excellent library schools have been established at the following institutions: Simmons College, Boston, Mass.; Western Reserve Uni-

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[1] Report on bibliographic instruction in colleges, made to New York State Library Association. See Report of U. S. Commissioner of Education, 1913, v. 1, p. 327.

LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, October 24, 1914.

Sir: The matter of the preparation of teachers for the schools of this country is of so great importance that any information which may contribute to our knowledge of the most effective ways of doing it is eagerly sought by those directly interested in the subject. The example of methods used in other countries is especially helpful. For this reason, in the summer of 1913 I detailed Charles H. Judd, professor of education in the University of Chicago, and at that time this bureau's specialist in higher education, to go to Europe and make a careful study of the education and training of teachers for the schools in England, Scotland, Germany, and some other countries. The manuscript submitted herewith is one of the results of this study. I recommend that it be published as a bulletin of the Bureau of Education.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

PREFACE.

The obligations of the writer of this report are so numerous that he despairs of being able adequately to acknowledge all of them. The way was hospitably prepared in all quarters; so that he found in England, Scotland, and Germany no difficulty in securing information of every kind and in obtaining the opportunity for personal observation wherever he sought such opportunity. One obligation incurred in Scotland is, however, of such a character that it calls for special acknowledgment. Mr. J. Malloch, director of studies of the Training College of Dundee, was kind enough to read over the pages of this report on Scotland. He offered a number of suggestions, which improved the statement and eliminated errors in the first draft. In England the vice chancellor of the University of Leeds, Dr. M. E. Sadler, contributed so much in the way of suggestion and personal introductions that the writer's visits were in very large measure guided by his kindness. Several gentlemen of the board of education were both officially and personally most helpful. The writer is under special obligation to Mr. F. Heath and Mr. A. E. Twentyman. In Germany Prof. Meumann, of Hamburg, gave indispensable advice and prepared the way for easy access to the institutions both in that city and in other States. In Berlin the gentlemen at the Amerika Institute and Herr Kullnick at the Preussische Auskunftstelle für Schulwesen greatly facilitated the preparation of material for the report. Finally, Dr. Kerschensteiner, of Munich, added one more to the list of Americans who stand under obligation to him by aiding the writer in conference and with suggestions.

CHARLES H. JUDD.

CHICAGO, *April 16, 1914.*

THE TRAINING OF TEACHERS IN ENGLAND, SCOTLAND, AND GERMANY.

I.

THE TRAINING OF TEACHERS IN ENGLAND.

There are as many different varieties of teachers in England as there are in the United States. There is, for example, the private teacher who has no special training and has never submitted himself to a certificating test by the State. Then there is the partially qualified teacher employed by the community which can not, or will not, pay for a well-trained teacher. This ill-fitted teacher is often recognized by the State and given some credential which puts the school in which he serves on the list of institutions receiving Government grants. If a school is to receive grants, its teachers must be "recognized" by the board of education. If a school does not receive State grants, it is free to do anything which its patrons will accept and support. In England there are many private schools which do not ask for State aid and do not submit to inspection. These private foundations are not included in the statistics or reports of the board of education. The teachers in these schools may be regarded as for the most part without the special training which is encouraged, but not absolutely required, by the State in the grant-supported schools.

Even in the schools inspected by the board of education and supported by its grants there is the greatest variation in the training of teachers. The following facts make it clear that special professional training is not required for appointment to teaching positions in England. Of the 9,126[1] full-time teachers in secondary schools which in 1912 received grants from the board of education, 5,348[2] were without professional training. Of this group of untrained teachers, 2,371 were also without degrees from college or university. The total number of secondary teachers without degrees was 3,715. In the ordinary public elementary schools there were, out of 29,552 head teachers, 12,346 not trained. Out of a total of 97,104 certificated staff teachers, 41,607 were not professionally trained. In addition, there were employed in the schools 39,125 uncertificated teachers and 12,249 supplementary teachers. This does not include part-time teachers.

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[1] Statistics of Public Education in England and Wales, 1911–12 (Cd. 6934), p. 114.

[2] Ibid, pp. 28 and 29.

The foregoing figures make it evident that the description of the English system of training of teachers must be recognized as covering only a part of the facts with regard to the teaching profession as that profession is actually constituted. The gravity of the situation is further indicated by the fact, which is repeatedly discussed in the official reports, that there is at the present time a marked undersupply of candidates for teaching positions, and that the number of students who are entering upon training is so small as to arouse serious apprehension regarding the future of the teaching profession.[1]

The training and certification of teachers is recognized as the function of the board of education, which has authority over the school affairs of all England. The board of education performs its work, however, through various local agencies. Thus there are training colleges for teachers, some of which were established by the churches, some by municipalities, and some by endowment from individual sources. Such training colleges are adopted by the board, and through grants to students and grants for buildings the board helps in their maintenance. Again, local educational authorities provide in secondary schools and in local training centers facilities for the education of designated students who are preparing for entrance upon the teaching profession. All these types of encouragement to students to become teachers are supervised and subsidized by the board, the board requiring in return conformity to its general principles of organization of the courses. The result of this method of procedure is great variation in the actual preparation of candidates for the profession, and a persistence of the traditional practices that have grown out of the older local methods. The present situation can perhaps be best explained by reviewing briefly the history of the training of elementary teachers in England.

The material for this historical statement is presented in a publication issued by the board of education, entitled "General Report on the Instruction and Training of Pupil-Teachers, 1903–1907, with Historical Introduction."

In the period 1839–40 the pupil-teacher system was developed in England through the activities of Dr. Kay, the first secretary of the committees of the council. Prior to the activities of Dr. Kay, the monitorial system, which had been developed by Bell and Lancaster, was very common in England. This monitorial system, it will be remembered, provided in every school a number of children of from 8 to 12 years of age who conveyed the information which they received from the teacher to younger children who were placed under their charge. This system proved to be very unsatisfactory, because of the immaturity of the monitors and because of their utter lack of interest in actual preparation for the teaching profession, most of the monitors being persons who did not intend to become teachers and who did not regard their monitorial duties as in any sense a part of their training for later life. Dr. Kay's plan was a modification of the monitorial system and created a class of apprentices in the schools known as pupil-teachers.

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[1] Report of the Board of Education, 1911–12 (Cd. 6707), p. 108 et seq.

The pupil-teacher is—

> a young teacher, in the first instance introduced to the notice of the master by his good qualities as one of the best instructed and most intelligent of the children, whose attainments and skill are full of promise, and who, having consented to remain at a low rate of remuneration in the school, is further rewarded by being enabled to avail himself of the opportunities afforded him for attaining particular skill in the art of teaching by daily practice in the school and by the gratuitous superintendence of his reading and studies by the master from whom he receives lessons on technical subjects of school instruction every evening.[1]

One additional fact regarding Dr. Kay's organization is to be noted as important. Not only was a salary paid to the pupil-teacher under this plan, but the head master who had the pupil in charge received also an increase in his salary paid by the central board of education.

The advance made by this pupil-teacher system over the monitorial system is described as great. A different and better qualified class of pupils undertook the work and remained in the teaching profession after their experience in the school. The number of such apprentices increased rapidly. Indeed, the inducements offered to pupils to enter upon the teaching profession, and the inducement offered to the head teachers to bring pupils into the pupil-teacher class, were so great that by 1862 the cost of the system became too great to permit its continuance. In 1861 the maximum number of pupil-teachers employed was 13,871. At this time the State was contributing a yearly grant of £15, or about $75, toward the salary of each pupil-teacher and was at the same time making a grant toward the cost of instruction.

In 1862, because of the pressure of numbers above referred to, a new plan was adopted whereby the teachers were no longer to receive from the board additions to their salaries, but a single arrangement was made directly with the managers of schools, and the managers were in turn to negotiate with pupil-teachers and masters any adjustment which they could make. This new arrangement not only affected the number of pupil-teachers very materially, but led to a loss of interest on the part of the teachers in the work of their pupils. The supplementary instruction which the scheme required the teachers to give to the pupil-teachers at night became less and less effective on the academic side, and the pupil-teacher system began to exhibit weaknesses which threatened the whole scheme. Not only were some of the teachers increasingly neglectful, but an additional difficulty came conspicuously to the surface in the fact that many teachers were found to be unable to give training to the pupil-teachers on the professional side.

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[1] Report of the Board of Education, 1911–12 (Cd. 6707), p. 3.

The official reports of this period, as well as the official reports which began to appear even before the change of 1862, show that there was frequent ground for criticism on the part of the inspectors as to the intelligence and efficiency of pupil-teachers. A corrective measure which suggested itself and began to be adopted in many quarters was that of centralizing the instruction of pupil-teachers. The example of Holland, which had influenced Dr. Kay in starting the pupil-teacher movement in England, as well as the natural tendency of the system itself, suggested the feasibility of bringing together all of the pupil-teachers in a city system for instruction at a central institution or pupil-teacher center. We are told that in Liverpool, in 1874—

> two experiments were set on foot; one took the form of a pupil-teacher college, at which the younger pupil-teachers were instructed during one afternoon in the week and the older ones during evenings and on Saturday mornings; the other was the attachment to the Roman Catholic training college of an institution in which the pupil-teachers of the numerous Roman Catholic schools in Liverpool were both lodged and taught. In other places pupil-teacher associations were formed, which attempted to assist the organization of head-teacher instruction by holding periodical examinations.[1]

The development of separate institutions for the training of pupil-teachers went forward very rapidly. In some localities opposition was encountered to the organization of these institutions, but this type of institution was soon legalized by statutory enactment and became the common agency for the preliminary preparation of teachers.

The next step of a radical character which was made came through the fusion of secondary school and the special centers for the training of pupil-teachers.[2] At Scarborough an interesting example appeared of the establishment through the joint efforts of the borough council and the school board of a pupil-teacher class in the secondary schools.

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[2] Ibid., p. 2.

[1] Report of the Board of Education, 1911–12 (Cd. 6707), p. 8.

Even in so rural an area as Wiltshire the building and staffs of secondary schools were in the same way made available for the instruction of pupil-teachers, who attend there for from three to five half days each week, although they did not share their instruction or their recreation with the ordinary scholars.

After the adoption of the code of 1902, the use of secondary schools for the training of students who were to become teachers developed into a common practice. Complications of one sort or another began, however, to appear. The academic interests of the secondary-school instructors who were interested in the subject matter were in a measure in conflict with the practical or professional interests of the pupils. One of the criticisms, as indicated above, of the pupil-teacher system was the deficiency in the academic training given to candidates. The instruction of pupil teachers in secondary schools tended to correct this difficulty. On the other hand, one of the supposed advantages of the old system was the great emphasis placed upon actual contact with children in the schools. To secure this contact with the schools during the period of secondary instruction involved many sacrifices on the part of the pupils' programs. The problem is still a live one in the English system. It has been solved in what may be called the regular system of teacher training by omitting practical training during the secondary period. Thus in the struggle between academic interests and practical interests the academic interests have won.

With the adoption of the secondary school as the center for the academic training of pupils, we arrive at what may be described as the present period of development of the system in England. The special modification of the system which typifies the present period is to be found in the fact mentioned above, that the prospective teacher now goes to the secondary school for a long period before he comes into any contact with actual class-room management and instruction. In other words, he is no longer a pupil teacher in the old sense of that term, selected by the head master because of his qualifications and immediately put in charge of some of the younger children; he is rather selected for higher academic training with a view to ultimate return to the schools after a course of training which takes him away for the time from the classroom and its duties. Students who are thus selected to be trained for the teaching profession are known as student teachers rather than pupil teachers. They are, as a matter of fact, students preparing somewhat remotely for the profession rather than actual participants. The old conception of the pupils associated directly with a single master has thus disappeared so far as the regular system of training urged by the board of education and sanctioned by its authority is concerned.

The student-teacher system as contrasted with the pupil-teacher system is, however, not fully established. Perhaps the most striking illustration of this is to be found in the fact that in Wales it has been thought impractical to carry out the student-teacher system, and there is a conscious return to the simpler form of training under the pupil-teacher system. It was found in Wales that it was quite impossible to recruit the ranks of the teaching profession through the system of secondary and advanced training provided by the student-teacher plan. The effort to get a full series of academic courses before the student begins to apply his knowledge to instruction of pupils broke down in Wales on the economic side because it produced a dearth of candidates willing to take this longer training before entering upon their professional duties.

It was noted in an earlier introductory paragraph that this same difficulty is confronting all England. Those who are optimistic about the present system do not believe that the present dearth of teachers will permanently handicap the system. On the other hand, there are those who are pessimistic about enforcing the elaborate system of secondary training which now constitutes one of the principal requirements in the training of teachers.

Going back, for the moment, to the situation in Wales, those who are concerned with the training of teachers in that State are satisfied to return to the earlier plan, because they believe that the apprenticeship system has certain inherent advantages that are in danger of being lost in the student-teacher plan. The apprenticeship system, they point out, is the natural system in small schools where the head master comes into intimate contact with the pupils. The small schools are most common in rural districts. If the children who might be selected and trained for teachers in rural districts are not allowed to enter the profession through a simple apprenticeship system, they will be lost to the profession altogether. Possible candidates from these small rural schools often can not go to secondary schools because such schools do not exist within easy reach; and, furthermore, the longer preliminary preparation discourages boys and girls whose ability is such that they would grow into very desirable additions to the profession. Moreover, it is believed by many that the practical experience to be gained through this apprenticeship system is a complete compensation for the limitations in academic training that constitute the major criticism against the pupil-teacher system. The knowledge which the pupil teacher gets is, it is argued, much more effective and practical than the knowledge secured in secondary schools. Whether these arguments in favor of the pupil-teacher system really justify a return to that system in Wales or are merely brought forward to support a social movement which is under way, is difficult for a casual observer to decide. Certain it is that in this district there is a recoil from the more elaborate student-teacher system authorized in England and now maintained as vigorously as possible by the board of education.

This historical and critical survey of the development of the pupil-teacher system has dealt only with the preliminary stage of the teacher's training. There are, indeed, many teachers classified by the board of education as not trained who derive their whole preparation for professional work without going beyond what is here described as the preliminary stage. Pupil teachers are still very common in England. On the other hand, the best-trained members of the profession are those who, after completing a term of years as student teachers, take a course in a training college. Here they complete a full academic and professional course. As indicated above, some of these training colleges were established by churches, some grew out of municipal pupil-teacher centers, and some have been established in the universities.

The history of training colleges would constitute an interesting parallel statement to accompany the foregoing statement of the development of the pupil-teacher system, but such a study of training colleges would not contribute any necessary elements of a comprehension of the present situation.

On the other hand, the evolution of the pupil-teacher plan explains many of the characteristics of the training colleges. Especially is this true with respect to the great emphasis which is laid in all training colleges upon practice teaching. The apprenticeship idea has been carried over and influences the actual organization of the teaching force and the program of teachers' colleges in a most emphatic degree. For example, one finds the professors in university training colleges devoting much time to demonstration lessons given by themselves to children brought from a neighboring public elementary school. Criticism lessons given by students and attended by other teachers in training are among the most common exercises in these training colleges. American audiences have from time to time had opportunities to observe some English professor of education conduct a class of children successfully before an audience. This is a sort of exercise which is very common in the English training colleges.

A second characteristic of the training colleges which impresses the observer very forcibly is the fact that all the regular agencies devoted to the training of teachers concentrate on the preparation of elementary teachers. Thus, in 1911–12[1] there were 80 colleges training 11,149 students to become elementary teachers. At the same time there were only 18[2] training colleges, and these graduated only 182 students with credentials showing that they were trained as teachers for the secondary schools. Even this statement is misleading if we do not keep in mind the fact that secondary teaching means in England something entirely different from what it means in the United States. Of the 182 students preparing to become secondary teachers, 145 were women, most of whom were preparing to teach in lower grades of the secondary schools.

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[1] Statistics of Public Education, 1911–12, p. 285.

[2] Ibid., p. 301.

The situation in this respect will be clearer if we digress for a moment to comment on the meaning of the term "secondary school," as that term is employed in England. The secondary school in England is characterized by the following facts: First, it is a tuition school; and second, its course of study is formulated, even in the lower grades, with a view to preparing pupils for admission to the higher schools. For example, the instruction in foreign language begins when the pupils in these schools are 10 years of age. The rest of the course is modified in the same general spirit of preparation for the upper classes. The English secondary school is not characterized by the fact that it admits only the older students. In fact, the secondary school has primary grades and upper grades.

The secondary schools are primarily the schools of the "better classes" of society. To be sure, all classes of children may sooner or later, through transfers, get into these schools, provided they attain a sufficient rank to secure scholarships. This is especially true where secondary schools are maintained by local authorities. Transfers from the elementary school always involve friction, however. There is constant complaint on the part of head masters of the municipal secondary schools that children are transferred at too late a date to the secondary schools. For example, in the case of the boy who completes the work of the elementary school and is transferred at the age of 13 or 14 from an elementary school where foreign language is never taught to a secondary school where the ordinary pupils have had languages for a period of three or four years, the transferred boy is at a distinct disadvantage in his later educational career. The secondary school is therefore to be considered, as in all continental countries, a parallel school covering the ground of the elementary school and not connected with it at the end of the course, as in our American system of education. When therefore one finds that the State is concerned more with the training of elementary school-teachers than with the training of secondary school-teachers he must recognize that the secondary schools are assumed to be better able to provide for themselves teachers of an adequate grade of excellence. The better salaries paid in these secondary schools and the higher standards of academic scholarship leave the central board of education free to concentrate attention upon the elementary schools. The result is, as pointed out above, that the training colleges of England, even the university departments, are characterized by their attention to elementary education.

Another characteristic of the training colleges which grows directly out of the traditional apprenticeship idea is the elaborate provision made in the organization of these institutions for practice schools. Formerly each training college conducted its own practice school, and in some of the older foundations the visitor finds such a practice school still in existence. For the most part, however, the public elementary schools of the city are organically related to the training college and furnish opportunity for practice. This necessitates much outside supervision on the part of the teachers of the training colleges. Indeed, in some cases practical critic teachers are taken on for part of the year to aid the regular staff in supervising outside practice teaching. In any case the corps of teachers devotes a very large amount of energy to this outside work, and the students often go a long way from the training college in order to work in schools.

The organization of practice teaching in schools not under direct control of the training college raises many issues and involves the discussion of many problems. Some of the common schools are not equipped with teachers who furnish good examples for the candidates. Therefore arrangements are made with the city authorities to concentrate their good teachers in one school. A better salary is paid to some of these better teachers. Personal conferences with the members of the training college staff also serve to improve the school. In short, the schools which are thus affiliated with the training colleges are often greatly advantaged by their affiliation with the training college.

Before turning to the details of the training of an individual teacher a brief statement should be made of the method of support of these training colleges and of the method of selecting candidates for admission.

In matters of support the training colleges are like all higher institutions of learning in England. All higher institutions exact a fee of the student; none are free.

The only free school in England is the elementary school. Originally the elementary school was open only to the poorer classes. It was maintained by some charitable or religious organization, and the students were socially looked down upon because they attended the free school. Families which could afford to send their children to schools which required a fee always did so. In view of this fee system a large number of scholarships or bursaries, as they are called, have grown up. The establishment of scholarships in various schools is one of the favorite forms of endowment. Scholarships, after being established, are awarded, usually on the basis of examination, to students who are regarded as superior. The individual student therefore very frequently gets his higher education without having to pay his own fee. In this sense of the word his education is free, but the school which he attends does not have to recognize him as a free student since it is reimbursed by the scholarship. When the act of 1902 led to the establishment of municipal secondary schools, the demand for such scholarships in these higher schools became immediately obvious, and funds of a public sort were set aside to support worthy students in these fee schools. There never was any movement, and probably never will be, to make the school free as our American high school is free. In other words, the support of the school is derived through its pupils, and even the public funds which are to be used in the schools must be paid for individual students who are attending these schools.

The same general formula applies in the institutions which train teachers. The preparation of a teacher is a State function. Funds for the training of these teachers must be provided by the Central Government, and yet these funds are to be paid to the institutions where the teachers are actually trained in terms of the individuals who attend the institutions. In some cases the central authorities make a grant for buildings. Indeed, 75 per cent of the cost of the buildings of a training college may be paid by the board of education in London, but as soon as the buildings are erected and the institution begins operation, further funds derived from the board of education are paid only as grants for the students who attend the school. In some cases the training colleges demand a fee which is in excess of the grant paid per student by the board of education. In some cases the grant from the board of education is supplemented by funds supplied by the local education authorities, but so far as the training college has current financial relations with the board of education, it is always in the form of sums paid for recognized scholars. The theory on which this system is maintained is the theory that the Government is thus able to select the students who are supported by public funds.

The selection of students for the higher institutions is one of the absorbing problems in English education. An observer from the United States, where institutions are free and anxious to welcome students, enters only slowly into the spirit of a system which is fundamentally interested only in selected individuals. This is the most essential difference between the higher schools of England and those of the United States.

The method of selecting students is everywhere the examination. Advancement from one school to another depends on some form of examination. Perhaps the fact that schools in England have been so diverse in character, and are consequently so unwilling to accept each other's products, explains in some measure the reliance placed on examinations, but the life of the system depends upon the fact that there is confidence in examinations as selecting instruments.

Examining candidates of all stages and degrees has become a profession. For example, there is a corporation at Oxford which conducts examinations in all parts of England. If a school wishes to be rated as efficient, it puts itself in communication with this Oxford corporation and asks for examinations in various subjects in which its students have been trained. The papers are prepared at Oxford by persons who have been employed by the examination corporation to set a series of questions, and after the answers have been written, the corporation corrects the answer papers.

What is done at Oxford is done also at various other institutions. Thus there is a general matriculation board which conducts examinations for the northern universities. The University of London is another examining institution which has a large influence in classifying students and admitting them to various educational and professional institutions. A host of other lesser examining agencies might be added to the list.

When one of these examining corporations or institutions has been in operation for a time, the board of education allows it sanction by accepting its examinations as official credentials. Students who pass the Oxford locals will be accepted as candidates for the teaching profession by the board of education. The Oxford local is accepted as a substitute for the examination conducted by the board itself. Not only the Oxford locals, but various other examinations, are listed by the board of education as acceptable in establishing the claim of a candidate for admission to a training college or for recognition as a student teacher.

It would hardly be appropriate for the American visitor to pass judgment after a few months of experience upon this whole scheme of selecting candidates for the higher schools of England. Certain it is, however, that English educators themselves see grave difficulties in the plan. Some of these appear in the fact that there are many different examining agencies, with standards which seem to differ radically from each other. Another serious difficulty is that the examination is set by some agency other than the teacher. Indeed, there is always a conscious effort to detach the examining agency from the teaching force. As in other parts of the world, the candidate who has native or acquired assurance and fluency shines in examination as contrasted with his slower fellow.

Whatever the objections to examination, the system is established and is the regular method of sending candidates on their careers of training for the teaching profession.

THE TRAINING OF ELEMENTARY TEACHERS.

The next section of this report will deal with the typical lines of training which qualify persons to enter the teaching profession as elementary teachers. As will be indicated later, and as has been intimated before, there is practically no professional training of secondary school-teachers in England. A number of different plans may be followed by the student who is looking forward to a teacher's certificate for elementary schools. These are all summarized in a pamphlet published by the board of education in 1912 entitled, "How to become a teacher in a public elementary school." On page 20 of that pamphlet there is a chart which is here reproduced. This chart

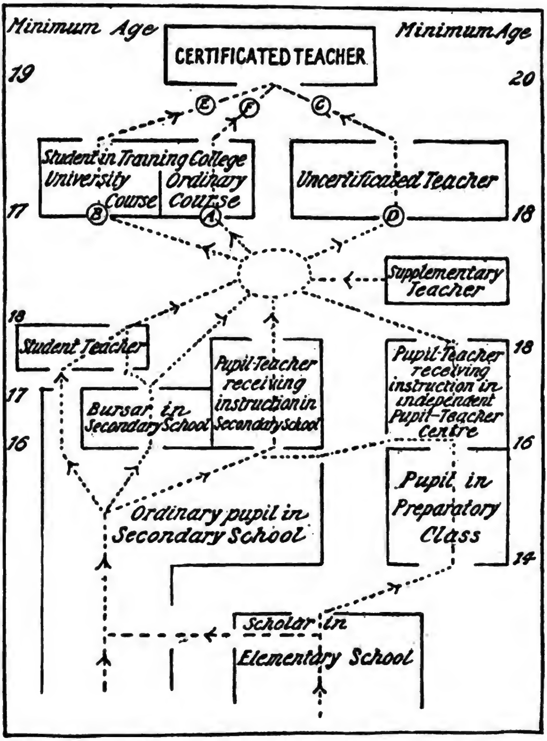
Minimum Age
CERTIFICATED TEACHER
Minimum Age
19
20
E
F
C
Student in Training College
University Course
Ordinary Course
B
A
Uncertificated Teacher
D
17
18
Supplementary Teacher
18
Student Teacher
Pupil-Teacher receiving instruction in Secondary School
Pupil-Teacher receiving instruction in independent Pupil-Teacher Centre
18
17
Bursar in Secondary School
16
16
Pupil in Preparatory Class
14
Ordinary pupil in Secondary School
Scholar in Elementary School

Diagram showing English plans of training for elementary school teachers.

shows all of the different plans of training in very compact form. We may now proceed to trace within this chart by means of explanatory statements a number of typical methods of entering the teaching profession.

It will be noted at the bottom of the chart that two types of pupils are able to enter the teaching profession, either those who come from the elementary school or those who come from the secondary school. As has already been pointed out, these two schools represent two different lines of progress, which ascend in parallel from the lowest grades upward. The transfer from the elementary school to the secondary school, which is indicated by the dotted horizontal line, going out of the elementary school into the secondary school, represents the passage of pupils who have secured scholarships from the elementary school into the secondary. About 25 per cent of the places in secondary schools on the grant list of the board of education are free to elementary pupils who can pass an examination.

KEY TO DIAGRAM ON PRECEDING PAGE.

This diagram is intended to represent the various ways in which a person may proceed through the different stages of the teaching profession.

The rectangles represent the status of the teacher at the various stages of his or her career; the dotted lines represent the several means of progress of the teacher through these stages; the letters inclosed in circles represent the examinations which the teacher has to pass in this progress.

It will be observed that the lines leading from the rectangles representing the early stages of the teaching career meet in an ellipse, from which other lines proceed leading to the rectangles representing the later stages. It is intended by this to represent the fact that teachers who have passed through these earlier stages by any one of the alternative routes indicated by the dotted lines may then proceed to the later stages, either by entering a training college, whether as an ordinary or a degree student, or by becoming uncertificated teachers. The examinations to be passed in each of these three cases are shown on the diagram by their appropriate letters. It should be observed that bursars and pupil teachers may have passed one of these examinations during their period of recognition as such, and that student teachers will have done so, as a rule, previous to the beginning of their recognition.

The minimum age at which intending teachers passing through a secondary school course and going direct to a training college can pass each stage is shown on the left-hand side of the diagram, for those passing through the pupil-teacher course is shown on the right-hand side.

The various examinations are indicated in the diagram by the following letters:

Ⓐ =One of the examinations mentioned in Appendix I. A.
Ⓑ =One of the examinations mentioned in Appendix I. B.
Ⓓ =One of the examinations mentioned in Appendix I. D.
Ⓔ =An approved final examination, conducted wholly or partly by a university.
Ⓕ =The board's final examination for students in training colleges.
Ⓖ =The board's certificate examination for teachers in elementary schools.

The pupil who comes from the elementary school into the secondary school or the pupil who has begun his work in the secondary school now passes forward through the ordinary academic training of the secondary school until he has reached a minimum age of 16. At this point he may be recognized by the board of education as a bursar. This is the middle group of the three indicated on the left-hand side of the chart. A bursar is a boy, or girl, who has declared his intention of entering the teaching profession and seeks a grant from the board of education on the ground of his scholarship and his plans for professional service to the State. He must be somewhere between 16 and 18 years of age. He must give evidence of physical fitness. Indeed, it is to be pointed out that at every stage of the teacher's training the board of education demands this qualification of physical fitness. The bursar must also have the recommendation of local authorities that he is a student of good qualifications. The particular method of determining these qualifications is left by the board of education to the local authorities, in consultation with the board's inspector. The candidate to become a bursar must also give special promise of being able to pass the examination which will qualify him for admission to the teachers' training college. It is not necessary that he shall have taken this examination, although in some cases he has actually passed the examinations and continues his training in the secondary school after absolving this examination. It is expected in any case that he will complete the examination during the year of his bursarship. He now goes on with his secondary school training without doing any teaching in the elementary school. Indeed, this is a striking example of the fact that under the present system the practical experience of the student has been postponed as it was not under the older pupil-teacher plan. A bursar is therefore to be recognized as a person who differentiates himself very notably from the ordinary pupil-teacher, whose career is represented on the right-hand side of the chart and will be the subject of later detailed explanation.

The bursar receives education free from all fees at the secondary school which he attends, and in addition he may have a maintenance allowance. This maintenance allowance and the free tuition may be in part paid by the local education authorities and in part by the board of education through grants made to the school. If a maintenance allowance is given to the bursar of between 5 and 10 pounds, the board of education pays half of the amount. Under certain conditions the board of education will cooperate in paying a somewhat larger maintenance allowance. The board gives £10 for the tuition grant, and under special conditions may increase this grant somewhat for each bursar. Bursars are not under ordinary circumstances appointed to these stipends unless they have been for three years in the secondary school prior to date of appointment.

There is, therefore, in this appointment a clear indication that the board of education and the local authorities are cooperating wherever it is reasonably possible to do so in the academic training of students who are later going into the teaching profession. The emphasis is here upon academic training; the practical experience is to be had at a later date. This mode of procedure is the one which the board of education favors as distinguished from the older system of pupil-teacher training, which is seen on the right side of the chart.

After the bursar has enjoyed his stipend for one year he may go forward directly into a teachers' training college. He may, on the other hand, be appointed to the position of student-teacher. It will be noted in the diagram that a person may become a student-teacher without having gone through the preliminary bursar stage. In any case, the student-teacher must be a person who has passed the examination for admission to a teachers' training college. He is therefore well on his way to complete training for the teaching profession, but he pauses at this time to get some further academic training in the secondary school and at the same time to accumulate some practical experience in the elementary school. He may be employed in an elementary school or he must, in any case, be in attendance upon the exercises of such school during the period when he is a student-teacher. For work in the elementary school he may receive such pay as the local education authorities determine. Furthermore, the local education authorities are allowed to lay out a program, subject to the inspection of the board of education, for the continuation of the training of these student-teachers. The student-teacher is a new type of pupil-teacher. He is to be found in those districts where the secondary school has given serious attention to the task of training teachers and where at the same time there is a demand for some assistance in the instruction in the elementary school. The advantage to the student-teacher himself is that he gets at this early date the kind of practical experience that was recognized as valuable all through the period when the only persons in training were pupil-teachers.

Special attention is called to the explanatory note which accompanies the chart. It would appear from the chart that the examination for admission to the training college occurs after the period of student-teacher training. It is noted in the explanatory paragraphs that this examination is regularly absolved, and the candidate must be qualified for admission to a training college before he can be appointed to the position of student-teacher.

Ordinarily the period for which a person may be a student-teacher is a single year. This may under special conditions be extended to a period of two years. After this training the candidate goes forward to his regular course in a training college or in a university department of education. In the training college he finds himself, under ordinary conditions, in a two-year course which will issue in a certificate allowing him to teach in the elementary schools.

The two-year course may be extended under special conditions to a three-year course; and if the student is attending a university department of education he may take a four-year "degree course," as it is called, the major part of which is devoted to general education, and only a small portion of which is given over to his special professional training. Students who take work in the university departments, if they receive board grants, begin their training on the theory that they are going into the elementary schools to teach after their graduation. Indeed, it is with this expectation that Parliament has made the grants which give to such students the opportunity which they enjoy of attending university courses with their fees paid and something more for maintenance. As a matter of fact, many of those who become interested in the degree courses in the college departments of education either seek positions later in the secondary schools of the country, where salaries are very much better than they are in the elementary schools, or they are deflected out of the teaching profession altogether. It is to be noted that the grants which are given by the board at different stages are all of them of such character that the student puts himself under obligation actually to teach in schools. If at any time he attempts to withdraw from this obligation, he is subject to the collection of heavy repayments of the sums that have been expended upon him; so that the pressure is very strong in all directions for the student to fulfill his obligation. It is noted that these obligations may, however, be fulfilled if the student teaches in secondary schools as well as if he teaches in elementary schools.

For the moment we shall turn away from the details of the training given in the teachers' colleges and university departments of education for the purpose of drawing attention to the less favored, but traditional, mode of entering the teaching profession through apprenticeship as pupil-teacher. If one examines the lines that run up on the right-hand side of the diagram, he will find a representation of conditions that are wholly different from those in which the secondary school plays a large part. The right-hand side of the diagram describes the conditions which are unavoidable in many rural districts and in many small towns where secondary schools are not easily accessible. Here the good student in the elementary school who is recognized by his teachers as a suitable candidate for the teaching profession is allowed to go forward with his training either in a special preparatory department which is connected with some local institution organized for the training of pupil-teachers, or he may find himself going forward with his training in certain independent preparatory classes which are sanctioned by the board for the simple reason that there is not at hand any special training center that can be charged with the responsibility of training teachers.

Preparatory classes for pupils who are going into the teaching profession are safeguarded by regulations of the board of education as far as possible. In the first place, there can be no such preparatory class in a secondary school; it must be where that kind of institution is impossible. And these classes must provide—

> at least nine meetings each week, of not less than two hours each, held after 7.30 in the morning and before 6 p. m., during 36 or more weeks in the year, and must provide a suitable course of instruction during either one or two years for pupils who are intending to become pupil-teachers. Pupils receiving instruction in a preparatory class may not be employed in any capacity in a public elementary school;[1]

that is, they are not pupil-teachers in any proper sense of the word at all. They are merely in preparation for later entrance upon practical employment. In other words, they are selected for the purpose of more intensive training; they represent a stage beyond the ordinary elementary school course, but they do not represent yet full entrance upon the privileges even of the lower stages of the teaching profession. It will be noted that the ages at which pupils may thus be provided for in preparatory centers are 14 to 16; that is, the period during which the ordinary child if he were in a community supplied with full education facilities would be taking courses in the secondary school. At 16 years of age a pupil who has been taking special preparatory work may be recognized as a pupil-teacher. This means that he will receive some further academic instruction, but he will also be doing some work in public elementary schools. The safeguards which the board of education has thrown around this type of training are very much more explicit in character than those which are thrown about the secondary schools which deal with the training of teachers. It is evident that long experience has made the board of education skeptical of the efficiency of the pupil-teacher system of training. We find, therefore, such regulations as the following, which express the attitude of the board of education that this type of training needs to be very explicitly directed:

> The center must be efficient; must not compete unduly with any other center, or with a neighboring school providing higher education; and, from its character and financial position, must be eligible to receive aid from public funds.

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[1] Regulations for the Preliminary Education of Elementary School Teachers (Cd. 7003), 1913, p. 12.

> A center to the governing board of which grants are to be paid under these regulations, must not be conducted for private profit or farmed out to the head master or mistress. The salaries of the teaching staff must in no case be subject to variations according to the amount of grant received.[1]

These regulations make it clear that the board of education ordinarily looks upon the development of secondary schools as the best agencies for the training of teachers. Nevertheless, the special pupil-teacher center is described in detail in the following regulation, viz:

> The curriculum of the center must make provision for instruction in English language, literature and composition, history, geography, mathematics (including arithmetic), science (including practical work), reading and recitation (including voice production), music, drawing, and physical exercises; and, unless special dispensation has been obtained from the board, in at least one language other than English. In a center for girls provision must be made for needlework, and in a center for boys, as a rule, for manual work. The course of study followed by each pupil-teacher must, except with the special approval of the board, be so arranged as to cover during the period of his recognition all the subjects included in the curriculum.[2]

The pupil-teacher who enters upon this type of training also has the opportunity of employment in the local school system.[3]

> Salaries, the amounts of which vary in the case of different local education authorities, are paid to pupil-teachers in respect to their services in the public elementary schools. On the other hand, the amount of instruction which they received is safeguarded by the following regulation:[4]

> A center must, unless some other arrangement has received the special consent of the board, be open for at least five meetings each week during 36 or more weeks of the year. * * * These meetings must be held after 7.30 in the morning and before 6 in the afternoon, and the minimum duration of a meeting must be two hours. The board may, by special arrangement made at the time of recognition of any center, accept meetings of exceptional length as the equivalent of more than one meeting in each case for the purpose of this article and of article 24 of these regulations. The pupil-teachers must attend with due regularity.

The pupil-teacher is expected through this type of special training to prepare himself for the leaving examination which will admit him to the teachers' training college or to the university department. It is to be noted that if the pupil-teacher has the latter ambition, of attending the university training department, his academic training must be intensive, so that he may meet the requirements of the university department. Many pupil-teachers thus trained enter the training colleges; indeed, in a later summary of the statistics of the different types of admission to the training colleges this matter will be touched upon again.

In this connection attention may be drawn to the fact that these special centers for the training of pupil-teachers do not always have an independent existence. There may be a special pupil-teacher center within a secondary school. This is represented in the middle part of the chart, where the pupil-teacher receiving instruction in the secondary school is set apart as a third group within the secondary school.

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[1] Regulations for the Preliminary Education of Elementary School Teachers (Cd. 7003), 1913, p. 10.

[2] Ibid., p. 8.

[3] Ibid., p. 5.

[4] Ibid., pp. 7–8.

Finally, attention is to be drawn to the fact that in addition to all of this preliminary training which has here been described as recognized by the board, there is a good deal of private training which does not draw from the board any grants. The term "recognition," as technically employed in the English educational system, means an official recognition on the part of the board of education with an accompanying grant. In many schools pupils are serving as pupil-teachers but are not being supported by the board of education. In some cases local authorities are providing themselves with candidates for the teaching profession by making local grants, and in a few cases pupils are carrying themselves forward without special aid for the purpose of training themselves for the teaching profession. Even in the training colleges for teachers there are so-called private students, or persons who are received and given training without any payment from the board of education either of their tuition or of their maintenance.

The whole system of preliminary preparation, accordingly, may be described as a series of parallel lines, one of which emphasizes the academic side of the training and passes through the bursarship into the training college. The other is the extreme case of a pupil who is employed during his training as pupil-teacher. Intermediate between these two are various stages of pupil-teacher or student-teacher training carried on institutionally or by interested head masters. In all except the distinctly academic plan at first described there are clear traces of the historical development of the system out of the apprenticeship system in which the pupil early becomes a part of the teaching machinery of the public-school system, giving instruction in some elementary school.

The grants paid for pupil-teachers who are recognized for one year are £7 10s.; for pupil-teachers recognized for two years, £15. Other grants of less amount will be paid for teachers who have complied with a part of the requirements only. Special grants are also made for the establishment of teachers' centers where they do not now exist. The following paragraph, which is included in the regulations for the preliminary education of elementary teachers, is so typical that it is here quoted to indicate the extent to which the board of education is disposed to cooperate in any scheme that will provide teachers:

> The board are prepared to consider proposals from local education authorities for the preliminary education of elementary school-teachers by systems other than those aided under the foregoing chapters of these regulations.

If they approve of the proposal, they make a grant to the authority in aid of their expenditure.

An authority having such an alternative scheme to submit must state the reasons for which it is required in their area to supplement or to take the place of the systems aided under the chapters named above, and must give a detailed estimate of the expenditures which the scheme will involve. In assessing the grant in aid of such a scheme the board will take into account, first, the extent to which it succeeds or is likely to succeed in producing qualified teachers; second, the expenditure incurred by the authority in respect of it out of funds available under part 2 of the Education Act of 1902; and, third, the amount of the funds at the board's disposal for the purpose of this chapter.[1]

In other words, the board of education, while favoring a secondary academic training as a preliminary to practical experience and as preparatory to entrance into teachers' colleges, will recognize a variety of other forms of training and will cooperate with local authorities in devising new means of supplying teachers for the school system.

The social level from which pupil-teachers and bursars are drawn is set forth in the following table, which is quoted from page 145 of the Statistics of the Board of Education:

Occupations of fathers of pupil teachers and bursars recognized for the first time in 1911–12.

Occupation of fathers.	Boys.				Girls.			
	Bursars.		Pupil teachers.		Pupil teachers.		Bursars.	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
1	2	3	4	5	6	7	8	9
Total number	723	100.0	393	100.0	1,562	100.0	2,135	100.0
Ministers of religion	2	0.3	4	1.0	14	0.9	19	0.9
Teachers	49	6.8	30	7.6	89	5.7	154	7.2
Members of other professions	13	1.8	6	1.5	77	4.9	82	3.8
Farmers	23	3.2	13	3.3	76	4.9	84	3.9
Wholesale traders (proprietors and managers)	16	2.2	12	3.1	105	6.7	88	4.1
Retail traders (proprietors and managers)	120	16.6	61	15.5	270	17.3	348	16.4
Traders' assistants	10	1.4	6	1.5	35	2.2	39	1.8
Contractors	10	1.4	4	1.0	23	1.5	53	2.5
Minor officials	39	5.4	16	4.1	88	5.6	105	4.9
Clerks, commercial travelers, and agents	81	11.2	45	11.5	181	11.6	307	14.4
Postmen, policemen, seamen, and soldiers	24	3.3	21	5.3	36	2.3	65	3.0
Domestic and other servants	22	3.0	7	1.8	52	3.3	87	4.1
Skilled workmen	273	37.7	148	37.7	454	29.1	616	28.9
Unskilled workmen	38	5.3	19	4.8	50	3.2	79	3.7
No occupation given	3	.4	1	.3	12	.8	9	.4

Before closing this discussion of the preliminary training of teachers a quotation may be inserted from the report of the board of education for 1911–12, which shows the difficulties of working the plan which is favored by the board of education, namely, the student-teacher plan of qualifying teachers. On page 108 of this report the following statement is made:

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[1] Regulations for the Preliminary Education of Elementary School Teachers, pp. 24–25.

> The decline in the number of entrants to the profession of elementary school-teacher, which is conspicuous at all stages of their preliminary education and training, appears also in the number of student teachers recognized during the year 1911–12. The numbers whose recognition began during that and during the two preceding years were as follows:

	Boys.	Girls.	Total.
1909–10	980	2,067	3,047
1910–11	887	1,920	2,807
1911–12	702	1,787	2,489

> The student teachers in any year are drawn in the main from those of the previous year's bursars who do not either continue to attend their secondary schools whole time or proceed direct to a training college. The decline in the number of student teachers is therefore the consequence of the decline in the number of bursars in the previous year. The number of bursars recognized in 1908–9 was 3,507; for 1909–10 it was 3,342; and for 1910–11 it was 2,764. It is a condition of recognition of all candidates as student teachers and in the case of ex-bursars the only condition that they shall have passed before recognition as student teachers begins an examination recognized by the board as qualifying for admission to a training college as a two-year student. Failure to pass such an examination by the end of the bursarship precludes a certain number of bursars from at once obtaining recognition as student teachers. The total number of candidates recommended to the board for recognition as student teachers for 1911–12 was 2,919, of whom 771 were boys and 2,148 girls. Of these, 86 boys and 432 girls failed to qualify for recognition from the beginning of the year, the reason in almost all cases being that they had failed to pass the necessary examination either in all or in one or more of the prescribed subjects.

Without attempting to follow the details of the discussion it will appear that the board of education is encountering a good deal of difficulty in its efforts to establish the regular procedure from bursarship through student teachership into training in the colleges. As pointed out in an earlier paragraph, the return in Wales to the pupil-teacher system indicates the necessity of keeping up in some fashion a supply of teachers in spite of the difficulties which the longer system of training through the secondary school seems to present. There is no immediate probability of a return on a large scale to the pure pupil-teacher system in England, but while there is a constant effort on the part of the board of education to turn this training in the direction of the secondary schools the actual forces of community life are pulling back again in the direction of a simpler pupil-teacher system.

TRAINING COLLEGES AND UNIVERSITY DEPARTMENTS OF EDUCATION.

We turn now to a discussion of the training colleges for teachers and the departments of education in universities which prepare the students for their certification examinations after they have concluded the period of preliminary training which has, up to this time, been the subject of discussion. In this discussion we shall hold, as before, to the training of elementary teachers.

During the year 1911–12 there were 80 training colleges for elementary teachers. Six of these were university training colleges providing a four-year course. There were 11 other training colleges connected with universities providing a shorter course than the full four-year degree course; 18 training colleges were conducted by local councils of education, and may be regarded therefore as part of the city or county systems. Finally, there were 45 voluntary training colleges.[1] This latter figure makes it perfectly clear that the tradition of training teachers in colleges privately organized, especially by the churches, is still very strong.

The training college may be either a residential college or a day college. If it is a residential college, it must conduct a hostel with boarding arrangements and may conduct a residence with rooming arrangements under the direct supervision of the board. There are 39 institutions among the 80 training colleges which conduct recognized hostels. Certain other institutions which receive no grant from the board are allowed to train "private" students and are classified as *certified.*

With regard to their staff the following regulations are made for training colleges by the board of education:

> The teaching staff of the institution must be such as to provide adequately for each of the following branches of study: 1. Education; 2. English language and literature; 3. History; 4. Geography; 5. Mathematics; 6. Elementary science.
>
> In training colleges in Wales, provision must also be made for the teaching of Welsh.[2]
>
> The number and qualifications of the teaching staff, their salaries, and their hours of duty must be approved by the board. The staff of a college at which some of the students are women must include a reasonable proportion of women, and in the case of a college attended mainly by women students, at least half of the permanent staff other than the principal must be women. At least two-thirds of the teaching staff of an institution applying for recognition as a training college for the first time must consist of persons holding university qualifications approved by the board. Until the proper proportion be attained, alternate vacancies, at least, in the nongraduate portion of

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[1] Of these 45 training colleges 29 belong to the Church of England, 7 to the Roman Catholic Church, 2 to the Wesleyan denomination, and 7 are undenominational.

[2] Regulations for the Training of Teachers for Elementary Schools (Cd. 6795), 1913, p. 2.

the staff of existing colleges must be filled by the appointment of persons holding such qualifications. All proposals for appointments to the teaching staff of a college, including the post of principal, must be submitted for approval to the board, together with the fullest possible details as to qualifications before they are confirmed by the governing body. A man proposed as principal of a college who does not hold a degree with honors of a British university will not, save in exceptional circumstances, be recognized for this purpose by the board.[1]

These regulations make it clear that the board of education is taking over in a very important sense even the voluntary training colleges.

The following table shows the size and training of the faculties or "staffs" of these colleges for 1912:[2]

Size and training of college faculties.

Institution and teachers.	Men.		Women.	
	Full time.	Part time.	Full time.	Part time.
University training colleges	43	[1] 60	48	25
Council training colleges	62	79	148	42
Voluntary training colleges	126	83	270	59
Certificated teachers (graduates):				
Professionally trained	107	....	93	....
Not professionally trained	6	....	4	....
Certificated (not graduates):				
Professionally trained	27	....	93	....
Not professionally trained	....	....	2	....
Graduates (not certificated)	83	....	170	....
Other teachers	8	....	104	....

[1] Not including professors and lecturers whose courses in academic subjects were attended by students in the training college.

With regard to the admission of students, these training colleges are also to be recognized as public institutions. Each training college seeks to fill up its student body through its own efforts, either by advertising or through the traditional connections which it has in the community about it. It is not uncommon to find in the newspapers of England the advertisement of a training college which is seeking candidates for admission. It will be remembered that these candidates constitute a source of income to the training college, because the board of education pays the fees of such candidates. Each one of the training colleges has an officer whose business it is to pass upon the qualifications of applicants. The one difficulty which seems to stand out conspicuously after the candidate has presented his proper examination credentials for admission is the difficulty of religious affiliations. Apparently some of the institutions are disposed to select only those candidates belonging to the same faith as the institution itself. The board has therefore found it necessary to set up the following regulation:

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[1] Regulations for the Training of Teachers for Elementary Schools (Cd. 6795), 1913, p. 4.

[2] Statistics of public Education, 1913, p. 284.

> In the selection of candidates for half the number of places which will be vacant, the authorities of a college may not reject, or invite the withdrawal of, the application of any candidate not belonging to the denomination of the college on the ground of religious faith or by reason of his refusal to undertake to attend or abstain from attending any place of religious worship, or any religious observance, or instruction in religious subjects in the college or elsewhere; nor may they require any candidate not belonging to the denomination of the college to enter for any examination in religious knowledge. No student may be refused admission to a college except on reasonable grounds, and in particular no student may be refused admission on the ground that he has not been vaccinated, or on the ground of social antecedents.[1]

These quotations indicate the gradual evolution of a system which was private in its origin into a public system, responsible to the State for the training of teachers for elementary schools. With reference to the whole religious controversy, it was the observation of the writer that this controversy does not present itself very commonly in the administration of training colleges. In fact, the statement was repeatedly made, especially in the council training colleges, that the matter of religious preference and religious prejudice was of no significance in actual administration. On the other hand, the authorities in some of the private institutions seem to magnify religious matters, and friction certainly threatens to arise if particular candidates for admission do not conform to the prejudices and expectations of the institution. It may be said, however, that these religious matters do not at the present time play any large part in the actual organization of these institutions.

Number of students in training colleges of different types in 1911–12.[1]

	Men.	Women.		Men.	Women.
University training colleges:			Voluntary colleges:		
Hostel students	111	255	Resident students	1,523	3,526
Day students	1,379	992	Hostel students	....	138
			Day students	64	141
Total	1,490	1,247	Total	1,587	3,805
Council colleges:					
Resident students	....	260			
Hostel students	151	658			
Day students	637	1,314			
Total	788	2,232			

[1] Statistics of Public Education, 1913, p. 285.

Statistics are not available to show directly the preparatory training of all of these students. Certain facts, however, can easily be drawn from the statistical reports to show the kind of candidates which are prepared for admission to the training colleges. These facts are presented in the following table:

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[1] Regulations for the Training of Teachers for Elementary Schools, pp. 8–9.

Number of pupil teachers and bursars reported in 1912 as passing examination qualifying them for admission to training colleges.[1]

I. Pupil teachers recognized from Aug. 1, 1909, for a normal period of two years	2,514
II. Bursars recognized from Aug. 1, 1910	1,725
Total	4,239

Student teachers admitted to training colleges in 1912:[2]

Men	647
Women	1,241
Total	1,888

The foregoing table shows that a very large percentage of teachers in training have come through centers of training other than the secondary schools. On the other hand, the large number of bursars and student teachers shown by the table indicates how far the present system has evolved away from the original pupil-teacher plan.

Turning from the student body to the course of study, we have seen, in connection with the description of the faculty or "staff," what are the chief elements of this course. The subjects of instruction there enumerated are divided into two classes, known as "General subjects, group A," and "Professional subjects, group B." The general subjects are English, history, geography, mathematics, elementary science, and in Welsh colleges Welsh. The professional subjects are the principles and practice of teaching, hygiene and physical training, theory of music and singing, reading and recitation, drawing, and, for women, needlework.[3]

The course of study in each one of these subjects is defined in a syllabus, which, however, gives a good deal of latitude to the local authorities in modifying the content of the work. Indeed, here, as throughout the system, emphasis is laid upon local initiative, but supervision is rigid in the expectation of reaching through supervision a high standard of work, whatever may be the variations in the particular local course of study administered.

The colleges also offer certain optional subjects. In this group may be mentioned French, German, Latin, physics, chemistry, botany, rural science, and housecraft. The successful completion of a course in any one of these optional subjects is recognized in the certificate granted to the teacher at the time of leaving.

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[1] Statistics of Public Education, 1913, pp. 196–97.
[2] Ibid., p. 208.
[3] Regulations, etc., p. 14.

Subjects under group A and group B were formerly required in full of all candidates for certification. With the increase of emphasis upon preparatory academic courses, it has come to be regarded as decreasingly necessary to emphasize the general subjects in the work done at the training colleges. The board of education now takes the position that the professional courses are essential to the equipment of any teacher, and these must be taken by the candidates in the course of their training. General subjects, however, do not need to be taken in full. The board of education requires students to complete only three of these general subjects, and in certain cases, with the special approval of the board, this number may be reduced to two. This latter provision of reduction to two is intended particularly to meet the case of students who desire to specialize on a certain side of their professional work.

Beyond this fundamental course which requires two years of training there is, in a limited number of cases, recognition of students for a third year of training. This recognition for a third year makes it possible for a student to specialize beyond the ordinary two-year course. Finally, as was indicated above, when the training course is administered in a university department it is entirely possible for a candidate to supplement his academic training so as to take four years of such academic training.

Returning now to the details of the course, one finds great emphasis laid in each of the training-college courses upon practice teaching. In this matter the regulations of the board are very explicit. On page X of the "Regulations" the board recommends that a certain amount of practice teaching be required in the first year's work in order that the college authorities may have an early opportunity of forming some opinion as to the teaching capacity of the students. Furthermore, on page XV the board states that students—

> who have not had practical experience as teachers in elementary schools in some capacity recognized by the board before entering the training college will be required to spend at least 12 weeks during their course of training in class teaching; and that, in the case of students who have had such practical experience before entering the training college, the period to be given to practice in class teaching may vary from 6 to 12 weeks, as may be determined by the college authorities in view of the circumstances in the particular case.

These regulations, the board points out, are intended to enforce the general principle that the primary purpose of a professional college is to afford a professional training to persons who are intending to become teachers. As reiterated in a number of the foregoing discussions, the board has attempted to require, so far as possible, adequate academic courses before the student enters the training college. In the college itself professional work is to have the right of way.

When one visits a training college, he finds himself surrounded by evidences of the overwhelming importance in these institutions of practical work. A very large fraction of the energy of students and staff is devoted directly to practice teaching. All of the members of the faculty or staff of the training college participate in the supervision of this practice teaching. This is true of those who teach special subjects, such as history, geography, mathematics, etc., as well as of those in the education courses. Indeed, as indicated before in this paper, the members of the faculty themselves take charge of classes of children and give exhibitions to the students of the way in which these classes can properly be conducted. A great deal of time is devoted to the careful personal criticism of the teachers-in-preparation, who have given a class exhibition before the instructor and their colleagues. These criticism exercises take the place in a very large measure of the courses which in America we designate courses in general method.

In striking contrast with this emphasis on practical education is the relative neglect of educational theory. One is very much impressed by the fact that in the English training colleges the whole theoretical side of pedagogy has a very meager and abstract treatment. One finds that the textbooks employed in the theoretical courses deal with the general science of psychology and with the discipline of logic and ethics, rather than with any of those practical applications which are being attempted in our American normal schools and college departments of education. In this respect there is so wide a breach between pedagogical theory and actual emphasis upon practice teaching in English institutions that one is tempted to say that the teachers in English training colleges have not realized the possibility of dealing in a scientific way with the practical problems of school organization and the practical problems which come up in the conduct of recitations.

Turning from the course of study to the financial conduct of the training colleges, it is to be pointed out once more that the board of education practically maintains these training colleges. A grant is made for each one of the students "recognized" under the regulations reviewed in the earlier paragraphs of this report. A grant of £13 a year is payable to the governing body of all approved training colleges as payment for the instruction given to a recognized student. If, in addition to giving instruction, the institution provides the rooming and boarding facilities, an additional grant of £40 is given for men and a grant of £25 for women. This makes an aggregate maintenance and tuition allowance of £53 for men and £38 for women. If a recognized student is a resident of one of the colleges of the universities of Oxford and Cambridge, personal grants are made to the students at the rate of £40 for the year. Any college may exact of the student a further fee above the board's grant.

In all of these cases it will be noted that the board of education is bearing a very heavy part of the cost of training the individual teacher. Not only so, but the board of education participates in the equipment and establishment of training colleges and hostels. A building grant will be made to any municipality or governing body, which must, however, not exceed 75 per cent of the cost of the land or 75 per cent of the capital expenditure invested in buildings. The buildings must conform to certain regulations with regard to their capacity for the accommodation of students. This Government subsidy of 75 per cent of the cost of buildings makes it possible for a municipality or for a governing board to have ample physical accommodations for the institution which it is conducting. Some magnificent new plants have been erected through the grants from the board of education. These plants in some cases provide for the living quarters of the students quite as much as for their instruction.

The foregoing paragraph makes it clear that the board of education has provided very generously for the early stages of the training of a teacher who is to give instruction in the elementary schools of England. Indeed, the English teacher-in-preparation receives from the board much more in the way of a maintenance grant than is common in America. If the teaching profession can be made attractive by providing a ready and inviting road into the profession, certainly England has done much to solve the problem. But it turns out, as has been indicated in earlier paragraphs, that there is a dearth of candidates. One begins to inquire immediately why it is that with all these attractive possibilities provided through the payment of fees and maintenance English young men and women are not crowding into the teaching profession. The answer is to be found in the fact that the payments made by the schools for teachers' salaries are so meager that the profession is not attractive, even though the path leading to the profession is made easy by the board of education. The writer heard repeatedly the pleas made by various teachers' organizations for an increase in the compensation of teachers, and it is the opinion of many of the leaders in English education that a radical change will have to be made in the salaries paid to teachers before the profession can be made as attractive as it ought to be. In other words, a profession can not be made attractive by subsidizing preparation for the profession. The career itself must be put upon a sound financial basis, and then students will be willing to invest their private resources in preparation. Evidence confirming this conclusion is to be found in the German school system where salaries are good and there are more candidates than can be accepted, as well as in the English civil service where, again, salaries are good and the admission examinations are very severe. The civil-service positions of England are more sought after by far than the positions in the schools.

After a student has passed through his period of training in the training college he is examined by the board and receives a certificate authorizing him to teach in the elementary schools of England and to participate in the retiring scheme which is in operation for certificated teachers. There are two methods by which the examination may be absolved. In the first place, there is an examination known as the final examination for students in training colleges, which is conducted by the board itself. Written papers are set in the courses in English, history, geography, mathematics, principles of teaching, hygiene, and theory of music. No written examination is given in the practice of teaching, physical training, reading and recitation, drawing, and needlework, but in this latter group of subjects the judgment of the staff or faculty of the training college is taken subject to careful scrutiny. The faculty must keep the record of each student in such form that it can be examined by the inspector of the board, and this record of the training college is a part of the evidence that a student is qualified to receive his certificate.

There is a second method by which the efficiency of the candidate may be determined. According to this second method, a joint examining body is organized for the purpose of examining candidates. One or more of the board's officers act as "assessors" of this examining body. Certain members of the commission are chosen from the staff of the training college, and there are included also other persons designated by the board to act on the commission. Not more than half of the number of the joint examining body may be members of the staff of the training college from which the candidate is to be examined. The theory on which such a board is constituted is, of course, that the impartial judgment of an outside board must be passed upon the work of the candidate. The judgments of this board are further safeguarded by the statement that the board of education reserves the right to accept or veto any proposals put forward by this joint examining body. After the examining board has been constituted it may canvass the ability of each candidate by written examinations in English, history, geography, and mathematics and by written examination or practical test in elementary science. Every student must be examined or tested in at least three of these subjects. In addition to the examination, there is to be a careful scrutiny of the candidate's record. The whole matter is to be submitted to the assessors appointed by the board of education, they in turn to pass upon the findings of the examining board. When a candidate for the certificate is a member of university classes and is taking the full degree course, examinations may be conducted by the university staff with the cooperation and approval of the officers of the board.

Those candidates who pass through this examination ordeal successfully are granted certificates. A variety of provisions are set down whereby candidates who at any stage of their work have failed to pass the examination satisfactorily may recover the loss if they make up the work.

There are numerous candidates who take the certificate examination from the board without having completed the course of training offered by the training colleges. In its annual report for 1912 the board gives a description of this class of candidates for teachers' certificates. Candidates were asked at the time of the examination to indicate the kind of training which they had taken for this examination. The following table presents the results, together with the number of failures of each class:

Training received by candidates for teachers' certificates.[1]

	Candidates.		Failures.	
	Number.	Per cent.	Number	Percent.
A. Oral classes for teachers provided by local authorities	914	21.1	577	63.1
B. Other oral classes	305	7.0	225	73.8
C. Correspondence classes	2,347	54.2	1,629	69.4
D. Oral and correspondence classes	131	3.0	88	67.2
E. Private tuition only	119	2.7	87	73.1
F. Private study only	493	11.4	349	70.8
Unclassified	22	....	....	....

It is to be noted that the failures of those who come to the examination without the course of training given by the training college are evidently very heavy. In its report the board calls attention to the fact that many candidates enter for these examinations who have very slight chance of successfully completing them. They are persons of somewhat irregular training, who in most cases have entered the ranks of the teaching profession through the pupil-teacher system and are now employed as uncertificated or irregular teachers in public schools or in private schools. That the board of education regards this class as relatively undesirable, and the class itself is gradually diminishing, is indicated by the table following and by the comments which are made by the board of education.

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[1] Report of the board of education, 1911–12, p. 118.

Results of examinations for teachers' certificates.[1]

Years.	Number who entered examination.	Number who passed.	Number who failed.	Percentage of failures.
				Per cent.
1908	5,197	2,122	3,075	59.2
1909	6,186	2,330	3,856	62.3
1910	6,663	2,011	4,652	69.8
1911	4,321	1,356	2,975	68.7

[1] Report, 1911-12, p. 116.

The comments are as follows:

> It will be observed that there was a very substantial decrease in the number who entered the examination in 1911. Various reasons may be assigned for this. The increase in the accommodation provided in training colleges has made it easy for all intending elementary-school teachers who have the inclination and the means to do so to take a course in training. * * * The action of the board in raising the standard required for a pass has no doubt contributed to this result. A contributory cause of the decrease in numbers may perhaps also have been the fact that the fee for the examination was raised from 5 shillings in 1910 to 10 shillings in 1911.

In other words, the whole effort of the board is turned in the direction of requiring a course of training in the training colleges, and irregular candidates show by the large number of failures which appear in this class that they are seriously handicapped in competition with those candidates who have taken the regular course.

Special teachers in domestic subjects and special teachers for the deaf and blind, as well as for special epileptic schools, are provided for in the regulations of the board. The board does not hold examinations for certificates in domestic subjects, but it does accept the diplomas given by certain recognized schools. Persons who have already qualified as certificated teachers may add this qualification to their certificates. On the other hand, persons who have not yet qualified as teachers, but are over 18 years of age and are recognized for their capacity in teaching as well as for their training, will be given recognition by the board as teachers of particular subjects. This latter type of permission to teach is restricted to special schools. For special teachers of the blind and deaf the board recognizes the examination conducted by the college of teachers of the blind and by the joint examination boards of the teachers of the deaf. These are two examining organizations which operate as private corporations, but are sanctioned by the board's authority as the instruments for selecting teachers who can carry on this special work.

There is a retiring allowance provided for every teacher who is certificated and engaged in teaching in schools receiving grants from the board. Under the law every teacher who is serving in recorded service must contribute to the Deferred Annuity Fund. The rate of contribution is £3 5s for men and £2 8s for women. These sums are withdrawn annually by the board from the grants made to local authorities. The local authorities in turn have the right to deduct the amount from the salary of teachers. Only recognized and certificated teachers are eligible to enjoyment of this fund. After a teacher has reached the age of 65 years at any later date at which his certificate expires he becomes entitled to an annuity for the remainder of his life. This annuity is fixed according to certain definite tables, which are published in the pamphlet entitled "Elementary School Teachers' Superannuation Pamphlet, 1912." Furthermore, under certain conditions an annuity may be awarded to disabled teachers who have not reached the age of retirement.

Finally, some tables may be copied from the report of the board of education setting forth the actual condition at the present time with regard to the changes that have taken place in recent years in the character of the teaching body.

The following table shows for England for the last three years, under types of area, the number of adult teachers of various grades per 1,000 children in average attendance:[1]

Teachers and attendance.

Type of local education; authority and year.	Number of scholars in average attendance.	Number of teachers for every 1,000 scholars in average attendance.				
		Certificated.		Uncertificated.	Other adult teachers.	Total adult teachers.
		Head.	Assistant.			
London:						
1909-10	652,630	3.56	21.00	0.91	0.44	25.91
1910-11	653,246	3.58	21.68	.73	.59	26.57
1911-12	649,031	3.61	22.39	.58	.16	26.74
County boroughs:						
1909-10	1,557,136	3.91	15.64	7.18	1.41	28.14
1910-11	1,564,430	3.92	16.19	6.98	1.16	28.25
1911-12	1,611,495	3.93	16.57	6.68	1.03	28.21
Urban districts:						
1909-10	289,842	3.69	15.37	6.49	1.28	26.84
1910-11	284,629	3.71	15.87	6.19	1.06	26.82
1911-12	266,349	3.71	16.53	5.90	1.06	27.19
Boroughs:						
1909-10	540,651	5.01	12.04	9.93	2.48	29.46
1910-11	546,610	5.00	12.80	9.83	1.92	29.55
1911-12	532,094	5.01	13.35	9.57	1.82	29.75
Counties:						
1909-10	1,925,869	8.76	6.83	11.08	6.45	33.13
1910-11	1,922,241	8.77	7.51	11.31	5.86	33.45
1911-12	1,892,711	8.88	7.92	11.22	5.76	30.26
Total:						
1909-10	4,966,128	5.85	12.52	8.13	3.35	29.85
1910-11	4,971,156	5.86	13.16	8.10	2.98	30.10
1911-12	4,951,680	5.89	13.67	7.89	2.81	30.26

In the table following the actual numbers of adult teachers of various grades employed in ordinary public elementary schools, and the percentage of each grade to the total, are shown for England for the last three years.

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[1] Report for the year 1911-12, pp. 50-52.

Number of teachers of various grades.

Grades of teachers.	1909-10		1910-11		1911-12	
	Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
Certificated	91,452	61.75	94,788	63.20	97,103	64.66
Uncertificated	40,453	27.32	40,351	26.90	39,126	26.05
Student-teachers	2,324	1.57	2,124	1.42	1,706	1.14
Supplementary teachers	13,861	9.36	12,722	8.48	12,249	8.15
Total adult teachers	148,090	....	149,985	....	150,184	....

During 1911–12 the total number of certificated teachers on the staffs of ordinary public elementary schools in England increased by 2,315 to 97,103. This total gives approximately one certificated teacher for every 51 scholars in average attendance. Taking the types of area separately, there is approximately one certificated teacher for every 38 scholars in London, for every 49 in the county boroughs, for every 53 in the boroughs and urban districts, and for every 60 in the counties. These average figures cover extremely wide variations among areas of the same type.

The following table shows an appreciable rise during the last three years in the proportion of certificated teachers employed in ordinary public elementary schools in England who have been trained.

Certificated teachers.

Year.	Men.			Women.			Men and women.		
	Number.	Number trained.	Percentage trained.	Number.	Number trained.	Percentage trained.	Number.	Number trained.	Percentage trained.
1909-10	30,101	21,204	70.44	61,351	28,299	46.13	91,452	49,503	54.13
1910-11	31,214	22,152	70.97	63,574	30,441	47.88	94,788	52,593	55.48
1911-12	31,998	23,016	71.93	65,105	32,479	49.89	97,103	55,495	57.15

Teachers other than certificated.

Year.	Uncertificated teachers.			Supplementary teachers.			Student-teachers.[1]		
	Men.	Women.	Total.	Men.	Women.	Total.	Men.	Women.	Total.
1909-10	5,022	35,431	40,453	43	13,818	13,861	773	1,551	2,324
1910-11	5,108	35,243	40,351	9	12,713	12,722	691	1,433	2,124
1911-12	4,814	34,312	39,126	....	12,249	12,249	509	1,197	1,706

[1] Includes only those employed in schools.

This report has, up to this point, concerned itself chiefly with the training of elementary school teachers. The reason for this is that there is no system of training for secondary school teachers in England. A brief pamphlet is issued by the board of education setting forth conditions on which secondary school teachers may be approved, and there are a number of institutions that give some attention to the preparation of teachers for secondary school work.

These special institutions, however, deal very largely with the preparation of teachers for the lower grades of the secondary school. The situation in England is even less organized in this respect than is the corresponding situation in America. There is no effort on the part of the universities to deal with the problem as there is in many of the State universities in America. The whole matter is so chaotic in England that one contrasts it very unfavorably with the situation either in France or in Germany. There is in England at this time a movement in the direction of a careful study of the German system of training of secondary teachers. In the meantime the board of education has set forth the matter vividly in its report of 1912, from which the following lengthy quotation may be drawn:[1]

> The question of providing the best preparation for those who propose to be masters and mistresses in secondary schools continues to cause much anxiety.
>
> Reports which the board have received from their inspectors show clearly two things: (1) That only a small portion of those who teach in secondary schools have made any attempt to qualify themselves for their work by professional training; (2) that a large number of teachers are employed who are seriously deficient in professional skill.
>
> As to the number, the following figures, which were collected some three years ago from certain groups of schools, comprising in all 1,339 teachers, are significant. There is no reason to believe that there has been any substantial change since then.

Qualifications of secondary school teachers.

	Untrained.	Secondary trained.	Elementary trained.
Men	365	19	160
Women	393	289	113

> The figures in the last column include those women trained for kindergarten work.
>
> As to the second point, the reports on the schools continue to show that the work of a large number of those engaged in teaching is to a large extent ineffective; that this ineffectiveness is, at any rate in many cases, partially caused by faults which are capable of remedy by advice and instruction; and that there are often serious defects in the work of even abler teachers, which are also such as might have been avoided by timely help.
>
> Often they are graduates in honors of Oxford or Cambridge who have the knowledge but are not able to give effect to it, because they have never seriously studied the methods of doing so. Some might be doing much better work but for some peculiarity—a strident or indistinct voice, or a manner tinged with asperity—which would naturally have been corrected by training, but to which it is difficult to allude in later years without offense. Others who are quite scholarly but have not been trained are strangely indifferent to details, such as the need for a definite scheme of lessons, the careful correction of written work, insistence upon clear speech, alert attitude, and a general absence of slovenliness.
>
> The deficiencies of the ordinary untrained man fresh from the universities are so marked that some sort of training may be hoped for as a corrective.

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[1] Report, 1913, pp. 76–81.

> I think the worst defect is a want of business-like management of time and opportunity.
>
> The present system allows men to drift along in the teaching profession without any security that they have learned to teach. [In one school] there was not one master who really knew how to handle a class, and, at least in some cases, this inefficiency seemed to arise simply from the fact that they had never been taught how to do so.

The remedy for this is unfortunately less clear than the need for some remedy; there still appears to be much uncertainty among schoolmasters and schoolmistresses, an uncertainty which is shared by many of the inspectors, as to the value of any training course which has up to now been available. "The need of training is more noticeable than the benefits derived from training."

This doubt does not apply to those engaged in teaching the youngest pupils; it is assumed by practically all that for kindergarten work training is essential, though one inspector takes exception to the Froebel plan on the ground of "waste of time over a sentimental, irrelevant, and outworn psychology and the very meticulous elaboration of the handwork required of candidates for the current certificates."

The importance attached to training for those who work in the lower forms is illustrated by the high value which the inspectors attach to the work of those who have been trained as elementary teachers. It will be seen by the statistics given above that a large number of elementary teachers are employed in secondary schools, and the inspectors recognize in the warmest way the work which they do, especially in the lower forms, though there is much difference of opinion as to their capacity for dealing with the higher forms.

> In schools of a particular type, especially in some municipal schools in which the bulk of the pupils are drawn direct from the public elementary schools, and in the smaller country schools, where the scale of salaries is not high, I do not believe that there is any teacher superior to the elementary-trained graduate or any so thoroughly inefficient as the second-rate university man.
>
> Their strength lies in the orderly presentation of the dry bones of a subject, while their weakness lies in the common defect of doing far too much for the pupils and of leaving too little to their independent efforts of thought and expression. They are often excellent instructors, and, as teachers, are specially of use with younger children, though they are comparatively a failure when teaching the upper forms of a secondary school. This is due to their lack of scholarship, and method can never take the place of scholarship.
>
> They introduce a regard for order, method, and neatness, and a careful adjustment of means to ends which is often wanting, and they lay a secure foundation on which the specialist members of the staff can build.

While there is a unanimous recognition of the value of these teachers in the schools, it would not be wise to attribute this entirely to the training course through which they have passed or to argue that a similar course would be beneficial to all teachers.

> The estimate put on the value of ex-elementary teachers is not necessarily an estimate of the value of their training in the strict sense. It is necessary to disentangle the influence of the training colleges from the other influences that have produced them. They have all had the experience of handling large classes; they have naturally, no doubt, been selected as the best among their class; their virtues and defects alike are derived largely from other sources than training colleges. Further, the work of the elementary training colleges has been largely academic rather than professional.

At any rate, among the men the number of those who have passed through a course of secondary training is so small that it would not be possible to base on it any secure opinion as to the value of the courses. There are, indeed, a considerable number of individual men and women who have derived real assistance from a course at a training college; on the other hand, there are many who hold a diploma of practical training but are in fact inefficient teachers, and neither schoolmasters nor inspectors seem to be convinced that training as at present provided is an effective remedy for many of the prevailing faults.

It would be unwise to attach too much weight to criticism, which is often based on the observation of a very few cases; but some important principles emerge from the views expressed by and to the board's officers, which form a substantial contribution to the problem.

There is, for example, a strong consensus of opinion that many teachers fail in knowledge of the subjects which they teach, and that it would be most undesirable to encourage any system by which the time spent in training was taken from that which is now available for study. "Far more serious than lack of training in the vast mass of teachers is lack of scholarship." "Unless a man knows his subject, no amount of training can make him teach it efficiently."

There is reason to fear that those who take a complete year's training before becoming teachers will take the time out of that which would otherwise be available for university studies, and this will often make the difference between reading for a pass or an honor degree. But to do good work in the higher forms of a really efficient secondary school a knowledge and mastery of a subject is required which is not insured by the possession of only a pass degree.

This is not unconnected with the two most common criticisms which are made on the system of training in a college before entering on the career of teacher. These are, first, that the instruction is too general and does not give sufficient help to the students in dealing with the particular subjects that they will have to teach; and secondly, that it comes at the wrong time—it should be subsequent to and not precede the first experience; for until they have had some experience of the difficulties students can not appreciate the value of what they learn and may even get absolute harm from it.

I have no hesitation in saying that a year of training following immediately on an academic course and without any previous practical experience is both on general principles and in practice less satisfactory than a course undertaken in vacation after some year's teaching. Men have sacrificed an additional year's reading for a training course, and it is very doubtful whether the gain in training justified the sacrifice of scholarship. One or two men who have gone through the training course have told me that they only dimly realized the bearing on their teaching of the theoretical work done in their lectures, and got little from the hints on methods and courses of study on account of their unfamiliarity with the practical difficulties of teaching.

The actual experience in class mangement gained in the course is too short and too artificial in its conditions really to test a man's powers of discipline or his effectiveness as a teacher, and all this has to be learned from the beginning when he starts his professional work. On the other hand, the masters who, after some years' teaching, have taken a vacation course and a diploma, seem to me, and acknowledge themselves, to have gained very substantially from it. They come to the study of practical problems with the data of experience, and they have the critical attitude necessary for useful discussion.

I have come across one or two cases where a young trained teacher was making egregious mistakes owing to misunderstood theory learned in a course of training, and some really capable teachers have frankly confessed that they did not understand a great deal taught them in lectures on theory.

On one point there is a more general agreement, viz. that training is more valuable to a man when he has had a year or two of actual work in school, though it is admitted that the school suffers during this period.

The benefit gained is far greater if the student has had some school and classroom experience. Without this experience, he has not found out what are his own particular difficulies when confronted with the same set of boys day by day; his own capacity as a teacher is undiscovered even to himself.

It is the want of this which causes some head masters or mistresses to speak of the unreality of the teaching experience obtained when in training.

There is a general agreement that not only is a training course taken after some experience more valuable (one head mistress held training was useless without two years' previous experience), but that it should be more directly addressed to the handling of the special subjects with which the student will be chiefly occupied.

If it could be said that a course of secondary training meant a study of the method of teaching one or two subjects with observation of other teachers and a substantial period of practice in teaching them, both under supervision and under normal conditions, I do not think that any one at all would deny its value.

One point that has impressed itself on my attention very much has been the gain that a training course could be to teachers in setting before them points connected with the teaching of particular subjects, such as results of recent experiments, special developments, etc. Especially would such a study be valuable in the teaching of English, history, geography, and elementary mathematics.

It would clearly be of great use if it were possible to send men qualified in their subjects to spend a couple of vacations, or even a term, in hearing the best teachers in that subject; if possible, with some practice themselves.

While general preliminary training, as at present conducted, is not of noticeable profit, training in teaching a special subject already mastered is different; but it is doubtful how far such training can successfully be given till after a man has himself experimented. At present such training is, perhaps, more effectively given in an occasional fashion than systematically in training colleges.

Holiday courses, e. g., in modern languages, geography, manual work, and gymnastics, have also proved of great value. The teachers themselves have frequently assured me of the benefit and stimulus which they have derived from them. In another direction, an improved and most valuable form of training has been given by the peripatetic teachers of the local authority in art, physical training, English, and modern languages. The local authority does not intend this help in any way to be a substitute for training. But it has certainly helped many young teachers in an expeditious way over initial difficulties, and put them in the way of correcting their faults and getting to know how a subject ought to be tackled.

One reason why training is not looked on with much appreciation by head masters is probably the fact, of which there is much evidence, that it is often of little use in enabling masters to overcome the difficulties of discipline. One inspector goes so far as to suggest that in a school with well-established traditions, previous training in other principles is an actual hindrance, and, of course, failure in discipline will obscure any other benefits that may have been derived from a course of training. It is noted, however, by one inspector, that those who have been trained under the Jesuit system are almost without exception good disciplinarians.

In view of these expressions of opinion, it is clear that the best method of dealing with the problem is not easy to find. The board propose, on the one hand, to continue to give all the help and encouragement which they can to the training colleges, so as to help them to work out the best course, and in addition to this, they have schemes for helping teachers in other ways under consideration.

An American observer inevitably notes certain aspects of the educational situation in England which differentiate that situation from the conditions common in American schools. In the first place, one finds relatively less attention given to the problem of supervision in English schools than is given to the same problem in this country. When one visits an elementary school in England he finds the "head teacher," who is the officer corresponding roughly to the

American principal, engaged not in the duties which are occupying the attention of most of the principals in our American schools, but in conducting a class. He is primarily a teacher, and continues to be a teacher throughout his life. He does not devote himself to the study of the problems of supervision as do trained principals in this country. The chief officer of the system corresponding to the American superintendent is often a man remote from the actual operations of the school. Furthermore, he is by no means as influential in the smaller municipalities as the school superintendent in our smaller towns. Indeed, supervision is very largely taken care of by the inspector of the board of education. The board of education has about 200 inspectors whose duty it is to visit schools all over England and make reports to the board about the doings of these schools. The board of education, through its power to give or withhold grants, exercises a very large influence upon the schools, and the inspectors of the board are virtually the superintendent of the schools of England. The local officers have in corresponding degree failed to learn the supervisory function which has been so fully cultivated in our country, where the independent districts are not supervised from any central point.

Given a central board of education supervising education from London and a body of teachers working in relatively little supervised schools, it seems natural to expect the rise of powerful organizations of teachers. The facts more than fulfill this expectation. There is no more powerful teachers' organization in the world than the National Union of Teachers. Out of a possible number of about 200,000 teachers in England, more than 80,000 are registered annually as members of this teachers' union. The officers of this union are persons of large political importance, and they are in constant communication with the board of education and with the local authorities in the effort to protect the interests of individual teachers. In addition to this union of teachers, which is made up very largely of the elementary teachers, there are a great number of other organizations made up of teachers and head masters of various types, each undertaking to protect the interests of a special group of teachers.

The large number and importance of these teachers' organizations can in some measure be explained by the compactness of the population of England, but it must also be attributed in part to the fact that the supervision of schools by the board of education as a central authority has aroused the local groups of teachers to perfect a kind of organization which shall care for their interests as distinguished from the central interests of the country as a whole.

Recently efforts have been made to bring together all of these different organizations under one supreme organization, which shall be the center of the whole teaching profession of England. This central organization is known as the Teachers' Registration Council. Following the example of the barristers of England, the teachers are attempting, through this council, to create a list which shall become the official list of the teaching profession. Certain qualifications have been set up. Fortunately these are qualifications that call for professional training. It is expected that ultimately the professional list thus created will be accepted by the board of education very much as the barristers' list is accepted by the courts.

It may be said that the board of education undertook to organize such a list of professional teachers some years ago, but the list did not attract the teachers of the country and was ultimately abandoned. There is very large prospect that the new list created by the teachers' organizations will be successful and will ultimately be accepted as the official register of professional teachers.

BIBLIOGRAPHY OF OFFICIAL PUBLICATIONS OF THE ENGLISH BOARD OF EDUCATION USED IN PREPARING THIS REPORT.

Elementary school teachers' superannuation pamphlet. London, Wyman & sons, ltd., 1912.

General report on the instruction and training of pupil-teachers, 1903–1907, with historical introduction. London, Wyman & sons, ltd., 109 Fetter Lane, 1907. (Cd. 3582)

General reports of H. M. Inspectors on elementary schools and training colleges for the year 1902. London, Wyman & sons, ltd., 1903. (Cd. 1706)

How to become a teacher in a public elementary school. London, Wyman & sons, ltd., 1912.

Regulations for the preliminary education of elementary school teachers. London, Wyman & sons, ltd., 1913. (Cd. 7003)

Regulations for the training of teachers for elementary schools. London, Wyman & sons, ltd., 1913. (Cd. 6795)

Regulations for the training of teachers for secondary schools. London, Wyman & sons, ltd., 1913. (Cd. 4753)

Report of the Board of education for the year 1911–1912. London, Wyman & sons, ltd., 1913. (Cd. 6707)

Statistics of public education in England and Wales. Part I. Educational statistics, 1911–12. London, Wyman & sons, ltd., 1913. (Cd. 6934)

Training colleges. Reports for the year 1900. London, Wyman & sons, ltd., 1901. (Cd. 567)

II.

THE TRAINING OF TEACHERS IN SCOTLAND.

In 1905, Scotland was training teachers very much as England does at the present time. There were in that year 2,718 uncertificated teachers out of a total teacher population of 20,685. Furthermore, 4,191 of this total were pupil-teachers or young persons in process of training who were at the same time giving time in the elementary schools to more or less responsible instructorial duties. The certificated teachers at this date were drawn from (*a*) examinations back of which there was no special institutional training; (*b*) university courses in academic subjects and in professional courses in education, all of which were tested at their conclusion by a certificating examination; and (*c*) training in certain training colleges provided chiefly by the churches. These training schools were under the close supervision of the education department of Scotland, though in 1901 the department had given up the practice of prescribing rigidly the courses to be pursued by students. From 1901 to 1905 these semiprivate training schools prepared and submitted for approval to the department syllabuses of their courses. In the preparation of courses by this method they enjoyed greater freedom than before, when the department prepared the syllabuses.

The system which we find in operation in 1905 was felt to be inadequate in all the respects in which the pupil-teacher system of England came to be regarded as inadequate. Furthermore, the semiprivate training colleges were unable to supply a sufficient number of teachers; hence there were a large number of uncertificated teachers employed in the schools. At this point the strong central educational department of Scotland took over the whole problem and inaugurated a new system. This new system has operated to eliminate the two classes of teachers so large in 1905, namely, the uncertificated teachers and the pupil-teachers, as will be seen by reference to the following table:

Classes of teachers employed, 1906–1912.

	1906	1907	1908	1909	1910	1911	1912
Certificated teachers	14,186	15.021	16,019	17.011	18.124	18,942	19,592
Uncertificated teachers	2,794	2,614	2,129	2.035	1.544	1,096	831
Pupil-teachers	4,323	3,585	1,896	807	324	74	35

The date set for the complete disappearance of the last two categories in Scotland is 1915. It should be noted that these statements include teachers of the higher schools as well as primary teachers, and that certificates are not granted to teachers in service unless they fulfill before 1915 through special courses of training the minimum requirements imposed on new teachers.

The new system adopted in 1905 went into effect July 7, 1906. In order to explain this system a typical case will be traced from the earliest schooling of the prospective teacher to complete certification. The typical case described will be that of a student who is preparing to become a primary-school teacher in the common schools. Like the other young children of the district, this teacher-to-be enters the infants' division of the so-called primary or elementary school at 5 years of age. He continues in the infants' division for two years. He then passes through the junior and senior divisions of the primary school in three and two years, respectively. At this point he is separated from many of his school fellows with whom he has spent the first seven years of his school life. Many of the pupils from the primary schools go at 12 years of age into schools where they receive a short course of training for trade or business life. Our teacher-to-be goes to a school in which he begins to look forward to the profession of teaching. He may at this point (12 years of age) transfer directly to a secondary school—that is, a school which prepares for the university, but which for his purposes is known as a "junior student center," and provides a five years' course—or he may go into what is known as an intermediate or higher grade school offering a three years' course (12 to 15 years). If he goes to the higher-grade school, which in most instances is a free school, his parents must undertake an obligation that he will continue his schooling for three years. If he goes to a secondary school, he may pay his fee, though in many and usually in all necessitous cases he receives a scholarship and an additional payment known as a maintenance allowance which provides him with books and other materials.

Whether in an intermediate school or a secondary school, our candidate now takes three years of general education like that taken by his fellows who are preparing for the other professions or for the more highly trained business positions. At the end of these three years, or when he is 15, he passes an examination conducted by the department's inspector in conjunction with the school authorities, and if successful receives what is known as the intermediate certificate. He may at this stage delay announcing his intention to teach and continue as a secondary-school pupil, coming into line for teacher's training at a later date. But if he receives the intermediate certificate, he may be appointed to a *junior studentship.* Appointment to this position is the first formal recognition of the fact that he is to become a teacher. He now has his fees paid by the local authority and may receive an allowance in addition. The appointment to junior studentship is confirmed by the education department on the recommendation of the local secondary education committee. It is assumed that the candidate recommended by the secondary committee is a selected person, and the principle of selection is the teacher's opinion of the likelihood of his becoming an efficient teacher. He is known to be academically qualified by the fact that he has passed the examination for the intermediate certificate. He must pass a health test. He must show such characteristics of a personal sort as to promise well for his future work as a teacher. It is to be remembered that the state department is taking him over for public service and is assuming the charges for his training.

The practical fact is that the selective process is not as rigorous as it was intended to be in theory. Here, as in England, the supply of candidates is so small as to cause anxiety for the future supply of teachers, and the nominating committees are very careful not to turn anyone who is available away. A member of one of the important secondary committees told the writer that not a single man who applied last year was rejected and very few women.

The candidate being selected and having become a junior student is now admitted to a school designated as a junior student center. This center must be approved by the department of education. The report of 1913 shows 115 such centers distributed over the country. Some of the centers are in public schools of higher grade, some in higher-grade Roman Catholic schools, some in academies, and some in secondary schools. The course of study provided in such a junior student center must include English, history, one language other than English, mathematics (including arithmetic), experimental science and nature study, geography, drawing, music, physical exercises.[1] It must further provide for each student additional instruction in suitable groups of subjects selected from those already enumerated, with which there may be conjoined, for the purposes of this selection, additional languages, and also such subjects as woodwork (for boys) or needlework and the domestic arts generally (for girls) or school gardening. There must also be provided "systematic training in the art of teaching each of the primary-school subjects. This training may be given either in the approved school or in a purely primary school."

The practical training of the junior students is a subject of much discussion. There are some who regard it as too little and compare it unfavorably with the practical experience formerly gained by pupil teachers. Others emphasize the value of academic training in such terms as the following, which are quoted with approval in one of the department's reports:

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[1] Regulations for the preliminary education, training, and certification of teachers for various grades of schools, pp. 2–3.

> In some schools the outgoing students are quite equal to the outgoing pupil teachers of former days, while in almost all cases they are much more intelligent and much more conscious of the fact that their art must be based on sound method.

After three years of training at a junior training center, the student passes at 18 years of age to a senior center or training college. The present system of training colleges marks the most radical departure of the new system from the system in existence prior to 1905. Prior to 1905, as indicated in an earlier paragraph, the training colleges were under church auspices, inspected by the education department, as are the training colleges of England to-day. Sir John Struthers, the head of the education department, took the radical step of substituting for these private institutions four training centers which are virtually State institutions. These four training colleges are controlled by provincial committees. The committees are composed of representatives of the university in the province in which the training college is located, representatives of the technical and secondary schools in the area, and representatives of the school committees which employ teachers after they have completed their training. The State equips the colleges with buildings and apparatus and pays the fees of students in the form of grants. The colleges administer curricula which for the majority of students extend through two years, though in certain cases, to be noted later, the course differs from this normal period.[1]

The courses offered by the training colleges are approved in detail by the education department. Syllabuses of these courses are prepared by the individual instructors in each of the institutions and passed on by the central authorities. These courses review the subjects which the teacher will have to teach later in the school, such as English, history, arithmetic, etc., and, in addition, include certain strictly professional subjects, such as hygiene, physical training, psychology, logic, ethics, theory of education, history of education, and methods of teaching. Furthermore, the training colleges give much practice teaching. For the purposes of practice and demonstration teaching each training college uses the public schools of the city in which it is situated.

The usual course of study of a candidate for a primary teacher's certificate as set forth in the foregoing paragraphs is accordingly seven years (from 5 to 12) in the primary school, two or normally three years (from 12 to 15) in a higher grade school, or the same in a secondary school, two or normally three years (from 15 to 18) in a junior student center, and two years in a training college. When his senior course has been successfully completed the teacher is given a probationary certificate and allowed to take a school. (After 1915, as noted above, no uncertificated teacher can be employed. The result is that older teachers who came into schools under the old plan have been qualifying since 1906 by taking short and appropriate courses especially provided by the provincial committees.) The permission to take a school is not the final step in the teacher's training. He is at first regarded as on probation and is subject to especially careful inspection. After two years of such probation a permanent certificate is issued, which is valid until the age of 65 years has been reached. Promotion after the granting of the permanent certificate depends upon acknowledged success in his teaching life and upon all those influences, social and domestic, that are operative in any line of professional work.

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[1] Training of Teachers, report of J. C. Smith, published as official document of the Scotch education department, 1913, p. 7.

Here, as in England, the student signs an "undertaking" to fulfill the course and to teach from two to six years, accordng to the sums which have been paid to him in fees and allowances. In general, these "undertakings" are seriously regarded; and the student, recognizing that he would have to pay back to the State the amounts expended on his education if he did not complete the course and render the service for which he is trained, completes his contract with the State.

Indeed, the whole arrangement is attractive to young people without private means of securing an education, because the State has power to pay all the fees in this course and also often gives a considerable allowance in addition. The result is that girls and boys from families of the artisan class and from the homes of small tradesmen are the common candidates for these stipends. Students who pay their own fees and are otherwise qualified are welcomed, but come under no obligation as to after service in schools.

The impending dearth of teachers to which reference was made grows out of conditions similar to those which are discussed in the report on England. The compact, highly centralized education department in Scotland has, however, up to this time been able to control matters very well. About 1,400 new teachers are needed each year in Scotland, and the training colleges are turning out about this number. The conditions of service are, however, not satisfactory and an initial subsidy of the teachers in training is not likely to keep up the supply. The small salaries in some of the remoter schools, and especially the isolated location of some of the districts, making promotion uncertain and difficult, are subjects of anxious discussion among teachers. If the department is to succeed in keeping the present nice balance between need for new teachers and the supply, there will have to be more attractive conditions supplied at the end of the course of training.

To the above description of the training of the majority of elementary teachers must be added statements regarding those students who do not go by the regular route, and also statements of additional opportunities offered to students in the training colleges through the fact that each of these training colleges is connected with a university. Finally, a description must be given of the requirements imposed on teachers in higher schools and in special subjects.

A number of the students in training colleges are at the same time attending university classes. In order to secure admission to the university classes the student must receive a Government "Leaving certificate" earned at an institution of secondary rank. This leaving certificate sometimes gets in the way of the practical training demanded of all junior students, because the academic requirements for the certificate leave no time for practice teaching. Some persons who intend to become teachers, therefore, do the work for the leaving certificate and go forward to the university without taking practical training in connection with the secondary course. Others do both the work for the leaving certificate and the work of junior students and mix their courses in the university and training colleges. Many of those who aim at higher subject teaching do not enter training colleges until after they have completed the university course, which is three years in length. For such students the training colleges provide a one-year course, which gives theoretical and practical—that is, the professional—training to supplement the courses in subject matter previously taken in the university. In certain cases where students combine the training college course with a university course, the combined course is three or four years in length. This adjustment of matters is relatively less common than the one year of practical training following a completed university course.

The requirement for the certificate of a teacher who is to teach in a higher-grade school, or in the upper grades of what we should call a high or secondary school, is that the candidate shall have, in addition to all that is required of a primary teacher, a university degree in an honors course in the special subject which he is to teach, and also in certain related courses in other cognate subjects. Thus the teacher of English must have, in addition to an honors degree in English, some courses in history; the teacher of mathematics must have, in addition to mathematics, science. In each subject the education department defines in detail the requirements in which a "teacher of higher subjects" must qualify.

Finally, there are special teachers in technical subjects, such as manual training, agriculture, domestic science, art, etc. These teachers often take their special or technical courses in technical schools and not in the training colleges. When the technical-school course is completed, the candidate takes his professional course at the training centers. He is then given a probationary certificate permitting him to teach the technical subject in which he has been professionally prepared.

The education department here, as in England, assumes no responsibility for the employment of teachers. Through its more compact organization it can obviously control matters more fully than can the board of education in England. Furthermore, the supervision of the Scotch department is more intimate and vital, for the department is financially the sole supporter of the training colleges. The failure to deal effectively with the matter of employment becomes the more obvious here because of the more intimate relation of the department to the teaching profession at every other point. It is safe to prophesy that the department will have to take in hand the matter of salaries if the plan is to succeed. Subsidies for teachers' salaries in schools of poor communities will have to be provided as the counterpart of the legal demand that the remotest highland school shall employ a teacher whose professional training can not under the most favorable conditions be completed before the candidate is 21.

There is a retiring system whereby the teacher, the education department, and the local authorities all contribute to a fund which pays pensions to teachers who have completed service up to the age of retiral, or earlier if due to ill health.

The effort to make professional preparation for "higher-subject" teaching compulsory deserves special reference. Certain of the reports from the training colleges show that it is not possible to conform to the requirements and secure a sufficient number of candidates from the Scotch universities. In this respect Scotland has taken advantage of the training given to prospective teachers in the neighboring English universities. Such English-trained teachers are now freely brought in to supply the necessary higher-grade teachers for Scotland.

Many of the comments made on the English system apply here also. The obvious carrying over of the influence of the pupil-teacher system impresses an American observer as one of the most striking characteristics of the system. The interrelation between university training and preparation for elementary teaching is, if anything, more impressive here than in England, because each training college is directly related to a university. Theoretical courses are, as in England, carried into logic and ethics and theoretical psychology to a degree not seen in American normal schools or even colleges of education. This somewhat formal theoretical work is in contrast with the large emphasis laid on practice teaching and demonstration lessons.

In certain other respects Scotland differs from England. Practical training begins regularly in Scotland in the earliest years of the junior student's training. The pupil-teacher system is wholly abolished. Finally, the most important contrast is to be found in the fact that here there is an effective requirement of professional training for teachers who are to teach "higher subjects."

BIBLIOGRAPHY OF EDUCATION IN SCOTLAND.

All material on Scotland is bound in a single volume, as follows:

Education (Scotland) Reports, etc., issued in 1912–13, printed May, 1913, by Eyre & Spottiswoode, ltd., London, and to be purchased through Wyman & sons, ltd., Fetter Lane, London.

Especially is the report of J. C. Smith, Esq., His Majesty's chief inspector for the training of teachers, to be taken in hand. This report is included in the above and may be had separately. It is entitled: Training of Teachers, London, Wyman & sons, ltd., 1913.

III.

THE TRAINING OF TEACHERS IN GERMANY.

In order to understand the German system of training teachers one must keep in mind the fundamental fact that there are two distinct branches of the German school system, one which trains the common people and is known as the *Volksschule*, and the other which trains the students who are to go forward into the university and into the professions. There is very little relation between these two departments of the German school system; so far as pupils are concerned, there is no relation above the earliest years. It is possible for a student who begins his training in the volksschule to pass into the higher schools after four years of attendance upon the volksschule. Such a student is, however, penalized to the extent of one year by making the change; that is, it is assumed that the three years of training which he would have received in the *Vorschule*, or primary department of a *Gymnasium*, is equivalent to four years in the volksschule. With the exception of this one possibility of transfer, it may be stated definitely that the two branches of the German system are, so far as students are concerned, entirely separate from each other. The boys and girls who go forward in the volksschule never have any expectation of entering a secondary school; they never have any expectation of going to the university; and they are not looking forward to entrance upon any one of the professional careers.

As between the position of volksschule teacher and the position of teacher in the higher schools, there is no possibility of transition. Indeed, those who teach in the volksschule have never, for the most part, had the training which would qualify them to become candidates for positions in the higher schools. They are persons who pass through the volksschule itself and afterwards receive the special training which equips them to go back into the schools from which they came. Candidates for positions in the higher schools, on the other hand, have passed through a secondary school and in all except the few cases where foreign study is accepted, have taken a course in a German university. The higher schools are therefore constantly kept in contact with the university. This is appropriate, as most of the students who complete the course in the gymnasium expect to go on to one of the divisions of the university and there receive their final training for admission to the profession.

The subsequent description of the training of German teachers will therefore fall for the most part into two wholly separate discussions. We shall take up in detail, first, the training of the teachers for the volksschule, since this is by all means the largest group, and shall later report on the training of the teachers who enter the secondary schools. Before turning to details, it may be pointed out in general that in both of these groups there are certain common characteristics. There is no possibility of getting into the teaching profession in Germany without a thoroughgoing equipment which has been carefully supervised by the State. Every teacher must satisfy State requirements of a very high order, and when the appointment is made in either branch of the German school system, it is an appointment for life, and an appointment to a position which is distinctly a Government position. In both branches of the service a teacher who has served to his sixty-fifth year is regularly pensioned, as is any other servant of the Government. The salaries also are comparatively good, with the result that there are in both branches of the profession many applicants above the actual needs of the schools. The results of competition are very satisfactory, in that weak candidates are readily eliminated, and the State has always the opportunity both in its training institutions and in its employment of teachers to make a rigid selection from among available candidates. Everything proceeds in the German system with great definiteness and regularity. The result is that the schools of Germany are supplied with a group of teachers of a very high degree of efficiency. There is also a uniformity in the school system which can be obtained only through the training of all the teachers through a dominant central authority.

The perfection of the system for training teachers is very notable in both branches of the service, but it is perhaps less striking in its treatment of volksschule teachers, because in most civilized countries provision has been made on a large scale for the training of elementary school teachers. The German system is unique, as contrasted with England and the United States, in the fact that there is a highly developed and very successful system for the training of the teachers of secondary schools. In fact, the American observer has his attention constantly turned to the fact that the secondary schools are much more completely organized than are the secondary schools of any other country; and the explanation of this fact is undoubtedly to be found in the training which is given to candidates for the teaching positions in these schools. Of all the unique characteristics of the German system, this special, rigid training of the secondary school teachers stands out as perhaps the most significant.

With these introductory remarks, we turn first to the description of the training of elementary school teachers. The course of study taken by the pupil who gets his education in the volksschule is eight years in length. Pupils enter at 6 years of age and are expected to complete the work, if they pass without interruption through the school, in their fourteenth year. Since most of those who teach in the volksschule come from this institution, this eight-year elementary course is the first stage in the ordinary teacher's training. Those who are to become candidates for the teaching profession must now take six additional years of training. The first three years beyond the volksschule may be taken in various ways. Some students attend certain institutions organized to give training preparatory to the regular normal course. Others study privately for three years before entering upon the regular normal course.

These preparatory and normal institutions constitute practically the only avenue for further academic training open to those who have passed through the volksschule. A boy who has completed the common-school course can not go on into any professional line of work, and he is not prepared to take training for secretaryships or other occupations that call for literary training. The boy may go into one of the lower technical schools where he becomes a craftsman, but the whole world of professional activity is practically closed to him, with the one exception of the teaching profession. Preparation for the teaching profession, as we shall see when we become acquainted with the details of the organization of the *Lehrerseminar*, as the normal school is called, is sufficiently subsidized by the Government, so that it is attractive to boys who are not well off financially, and it is open to those who have completed the course of the volksschule. The result is that there is a great crowding into the lehrerseminar. Every boy of the lower classes of society who feels himself capable of pursuing an intelluctual career aims to become a teacher, and he makes application after his three years of preparatory training to a lehrerseminar, with the result that he finds himself in competition with more people than can be received into the profession. In all of the States, therefore, there is a high degree of selection possible at the very beginning of the normal training. Indeed, there are more candidates applying for admission to the *Präparendenanstalten*, or preparatory schools, than can there be accommodated.

A recent investigation of the degree to which this selective process is going on is reported by the *Bund für Schul Reform* in its report[1] for 1912. Thus, in Saxony, 30 places being vacant in any given lehrerseminar, there are usually 80 candidates applying for these places. In Saxe-Weimar 75 per cent of the candidates are accepted.

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[1] Vorbericht, published by Teubner, Leipzig, 1912, p. 50.

In Prussia as low as one-third of the candidates are accepted in many of the lehrerseminare. In general it may be said that approximately 50 per cent of the candidates who present themselves at the lehrerseminar are excluded. In the Province of Oldenburg it is customary to admit all of the candidates who apply and eliminate those who are unsatisfactory during the early years of the training. This device has certain advantages in that it gives the institutions a larger opportunity to become acquainted with the characteristics of the applicant. The elimination is therefore, on the whole, somewhat more rational and the resulting body of students more satisfactory to the institution.

The social status of the families from which candidates for the teaching profession in the volksschule are drawn is represented in the following study, which was made in preparation for the Brussels exposition. An investigation was made of 21,943 typical students in the Präparendenanstalten,[1] and it was found that the fathers of 1,335 of these preparatory students were laborers. The fathers of 2,610 were shopkeepers and restaurant keepers. Students to the number of 2,917 were the sons of teachers; 4,613 were the sons of small landowners; 5,084 were the sons of city and State officials of the lower grades, such as police officers, car conductors, etc.; and 5,384 were sons of factory workers. These figures show to what extent the humbler classes find in the teaching profession an opportunity for an intellectual career for the boys who are superior in mental ability to the common run of students in the volksschule.

The preparatory institutions are of two classes. They are either independent of the lehrerseminar or organized in connection with the normal institution. The largest of the German States, Prussia, has only meager provision of a preparatory sort for the training of candidates who are to enter the lehrerseminar. Very frequently the preparatory department is located within a lehrerseminar, but is not conducted by the State. The director of the lehrerseminar may conduct a Präparendenanstalt, but the State does not pay the expenses or undertake the responsibility of its maintenance.

The following table indicates the number of Präparendenanstalten belonging to Prussia and the number that exist within the State but are not conducted by the State itself:

Präparendenanstalten, 1912.

	Number.	Students.	Protestant students.	Catholic students.
Belonging to State	84	7,156	4,462	2,694
Not belonging to State	159	14,623	10,089	4,534

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[1] Vorbericht, Bund für Schulreform, 1912, p. 50.

Incidentally, it will be noted in this table that a division is made between the Protestant students and the Catholic students. This sort of denominational division runs through the entire German common-school system from volksschule to teacher-training institutions. This is due to the fact that in all of the German schools religion is a regular subject of instruction, and the various religious bodies hold themselves aloof from each other and insist upon a separate type of instruction for their students.

These Präparendenanstalten administer a course which in kind is not fundamentally different from the course given in the later normal years. Indeed, in some of the States, as, for example, in Saxony, it has been found advantageous to increase the length of the total period of training of the teacher to seven years instead of the six now to be found in most of the States. The seventh year in Saxony is a year at the beginning of the student's training; that is, the student may have the last year of his ordinary training not in the volksschule itself, but rather in a preparatory department of a lehrerseminar. He will then receive some normal training at a period earlier than is common in the other States. On the other hand, in Bavaria the total period of normal training is five years. This indicates a general level of school organization which is somewhat lower than that of the northern German States.

Assuming Prussia as the typical State, the following table gives the course of study prescribed for the preparatory department and for the lehrerseminar itself:

Time table of preparatory institutions and normal schools in hours per week.[1]

Subjects.	Preparatory institutions.			Normal schools.		
	III	II	I	III	II	I
Pedagogy				3	3	3
Lesson-planning and model lessons					[2](4)	4
Practice teaching						4-6
Religion	4	4	3	3	4	[3] 3
German	5	5	5	5	5	[3] 3
Foreign languages	3	3	3	2	2	2
History	2	2	3	2	2	2
Mathematics	5	5	5	5	5	[4] 1
Science and nature study	2	4	4	4	4	[4] 1
Geography	2	2	2	3	2	[4] 1
Writing	2	2	1			
Drawing	2	2	2	2	2	1
Gymnastics	3	3	3	3	3	[4] 3
Music	3	4	5	4	4	4
Practice (music) and chorus work	1	1	1	1	1	1
Agriculture				1	1	
Totals	34	37	37	38	38	33-35

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[1] Bestimmung vom 1. Juli, 1901, betreffend, etc., p. 23, or Von Bremen, p. 214.
[2] Included in hours set down for subject matter.
[3] One hour for method.
[4] Method.

The members of the faculty of the seminare are usually seven in number, namely, a director, a first instructor, and five teachers. They are drawn from the elementary schools. In order to become a member of the seminar faculty a man must have taken not only the preliminary examinations which admit him to the staff of the volksschule, but he must also have passed the second examination which would admit him to the higher grade of volksschule, known as the *Mittelschule*, and the final examination which would qualify him to become a *rector* or a principal of an elementary school. He may then be admitted to the faculty of the seminar.

Not all of the members of the faculty are, however, thus drawn from the elementary schools. Some of them come from the clergy. It is to remembered that the minister of education in Prussia and in some of the other Provinces is also the minister of religion. There is a strong religious emphasis everywhere in the schools of Germany. Indeed, these schools originated as catechism schools, and religion forms to-day one of the important items of instruction in every such school. Again, it will be remembered that the schools are commonly divided according to the religious affiliations of the pupils who attend them. In certain parts of Germany the distinction between the Catholic schools and the Protestant schools is very sharply drawn, and everywhere the children are divided during the period of religious instruction so as not to ignore their religious affiliations. With all of this devotion to religion as a part of the public educational system, it is natural that the institutions that train teachers should give full recognition to religious affiliations. Many of the directors of the seminare—that is, the chief executive officers of the institutions—were at one time students of theology or members of the clergy.

It is difficult for a casual observer to discover the full import of this relation between the teachers' seminar and the church. The writer had two different explanations of the situation offered to him. In the first place, he found a number of the heads of these institutions stoutly defending the relation between the seminare and the church on the ground that it is the duty of the seminar to provide proper religious instruction for those who are to become the teachers of the people. Here a strong devotion to religious matters was obvious, and many of these directors are prepared to go a step further and hold that the most significant work of the school is the training in religion. They are quite willing to subordinate any of the other interests to this major consideration. On the other hand, some of the younger directors pointed out explicitly that the motive which prompted them to give up the clerical career and take up teaching was their liberal attitude toward theology. They regard the school as a civil institution rather than a strictly religious institution, and they hold that one can do for the people of the country more really beneficial service in the schools than by remaining in the church. For these men the schools therefore furnished especially inviting opportunity to be liberal in theological matters.

With these two contrasting points of view, both explicitly presented by members of the profession, it would be bold to undertake to evaluate the system from either point of view. Certainly in the conservative seminare, where the matters of religion are emphasized, there is a disposition to hold very tenaciously to the older traditions of the German schools. In these seminare there is very little disposition to undertake anything in the way of newer lines of instruction. There is a dense conservatism which reflects itself in the actual conduct of the volksschule, where one finds that both the subject matter of instruction and the methods of procedure have long remained unchanged.

The connection of the volksschule with the church is more intricate than is the connection of the volksschule with the higher schools and universities. Some of the teachers of the seminar are drawn from the higher schools. The higher schools are so crowded with candidates at the present time that these seminar positions are sometimes sought by men who have completed their university training and who have taken the examination for the higher schools. The number of such candidates coming into the seminare from the higher schools is relatively small, and the advantage to the volksschule of this migration from the higher schools is perhaps somewhat doubtful. The experience which is necessary to conduct sympathetically the work in the elementary school is commonly lacking in these cases. There is less sympathy for the shortcomings of the ill-trained pupils of the elementary school, and the demands made by these young men who have been trained in the higher schools upon the young boys of the volksschule are relatively unpsychological and often overstrenuous. On the other hand, the advantage which comes to the seminare from contact with higher education is probably in some cases great. The outlook of the students in the seminare is limited by the fact that they have all of them had a volksschule training rather than a higher training, and it is only through contact with the higher institutions and the universities that the modern scientific point of view and the new body of material that has been created in the German universities will ever find its way into the lower school. The only statement which can be made at the present moment is that not much of this university-made material has up to this time found its way into the volksschule. The influence which the few migrants from the upper schools have exercised can not, therefore, have been very large in opposition to the conservative forces which tend to hold the volksschule true to its original program and method of work.

There is one movement in Germany which ought to be mentioned in this connection. A distinct effort is now made in many quarters to bring the teachers of the volksschule into contact with university opportunities. The seminar as it now stands is officially classified as a higher school. This means that those who complete its course are freed from the full military service. Graduates of the seminar have the same military privileges as the students who have completed the required work in the gymnasium and are called upon for military service only during a single year. This recognition of the seminar for the military privilege is a great asset and accounts in part for the number of candidates who seek admission to the institution. The seminar is not yet recognized in the full sense of the word as a higher school, however, because its graduates are not admitted to university privileges. This matter has frequently been discussed. The teachers' organizations all over Germany have insisted that the volksschule teachers ought to have the right, after completing the course of the seminar, to enter upon university classes. It is pointed out in answer that it is quite impossible for the German universities to accommodate the number of people who would thus be qualified for admission. In general it is one of the contentions of a large body of German educators that the universities at the present time are turning out more professionally qualified persons than it is possible for the country to accommodate. Beyond this, attention is drawn to the fact that the seminar does not give that kind of general training which is necessary for the proper pursuit of advanced university work. At all events, up to this time the volksschule teachers have not succeeded in gaining admission to the universities. In Saxony a kind of grudging permission has been given to the teachers of the volksschule. Here they may, if they have very high marks in their examination, be admitted to the university, where they may in turn complete the course and receive a degree, provided they do their work at an unusually high level. All along the path of the Saxon volksschule teacher, however, are obstacles that are almost insurmountable. The result is that the permission in Saxony is relatively inoperative, and in the other States, especially in Prussia, there is no such permission whatsoever.

This effort of the teachers' seminar to make its way, therefore, into the class of higher schools has thus far been successful only to a very small degree, and there is little probability at the present moment that the movement is likely to make rapid progress. The volksschule-seminar remains a relatively isolated institution. It is more isolated than the American normal school, and for this reason it shows all of the marks of conservatism arising from its lack of contact with the major current of German intellectual life, which passes through the higher schools and the university, not through the volksschule or the lehrerseminar.

Admission to the lehrerseminar proper from any form of preliminary training is on the basis of an examination. This examination is both oral and written. Students are required to show their ability in reading, writing, and number work, and in other branches through oral examination. The ordinary procedure is usually a written examination, which serves to eliminate those candidates who are too immature to be considered further. Those who succeed in passing the written examination are admitted to an oral examination, where they are subjected to a general test of the work which they have done in the lower schools.

Attention is again drawn to the fact that more candidates present themselves for the lehrerseminar than it is possible to accommodate. The lehrerseminare proper are usually small institutions. In Prussia the number of each class is limited to 30, and the institutions themselves are usually located in small suburban towns or even in the country districts. It is the policy of the Prussian Government to remove the lehrerseminare from the great cities. Many of the institutions take the students into dormitories and board them and house them during the period of their training.

The Government pays for the buildings and grounds occupied by these institutions. The plans are commodious, though in each case the student body is kept small. The seminar usually has a total of from 60 to 90 students. It will be pointed out later that a part of the official salary of the teacher is based upon the cost of rent in the locality where the teacher does his work. Provision is made for this item in the case of the director of a seminar, and usually in the case of the member of the faculty who is in charge of the practice school by including in the buildings erected for the seminar residence quarters for these officers.

The total number of lehrerseminare in Prussia is indicated in the following table:

Prussian institutions for the training of volksschule teachers, 1912.[1]

	Number of institutions.		Students.		Teachers.	
	For men.	For women.	Men.	Women.	Men.	Women.
Protestant	118	8			867	38
Catholic	61	10	17,234	1,653	476	54
Mixed	4					

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[1] Statistisches Jahrbuch für den Preussischen Staat, 1913, p. 427.

It will be noted immediately from this table that the major number of candidates for the teaching profession are men. This fact comports with the general fact that the teachers of the volksschule are predominantly men, as is shown in the following table, which presents the distribution of students and teachers in all classes of volksschulen throughout the Empire:

Volksschule, 1911.[1]

	Public.	Private.
Number of—		
Schools	61,557	480
Male teachers	148,217	....
Female teachers	39,268	....
Boys	5,157,446	11,894
Girls	5,152,503	14,257

[1] Statistisches Jahrbuch für das Deutsche Reich, 1913, p. 300.

Mittelschule.

	Public.	Private.
Number of—		
Schools	914	1,135
Male teachers	5,147	1,131
Female teachers	2,384	3,403
Boys	135,799	21,873
Girls	137,595	58,787

The course of training required for the women who enter the teaching profession is usually shorter than that required of the men. Thus in Prussia the period of training is five years for women as contrasted with six for men. These women are trained in special institutions known as *Lehrerinnenseminare.*

In general all schools in Germany are separate schools for boys and girls. This statement does not hold for the small schools in the rural districts and villages, but in the cities the girls are always separated from the boys. Women are not employed in the instruction of boys except in the lowest grades. Even here it is more common for the boys to receive their instruction from men. On the other hand, the girls in the elementary schools are very commonly instructed by male teachers.

Students who are admitted to the Lehrerseminar find that the State has provided them with free tuition. This is practically the only higher school of Germany where tuition is free. Even in the Präparendenanstalten a fee is commonly charged, although the fee is in some States remitted for worthy students. In the lehrerseminar itself not only is the tuition free, but in some States the student is given his room, in some his room and board. It is not uncommon for the State to give worthy students a stipend.

The course of study administered in these lehrerseminare is prescribed in great detail. Each of the subjects presented in the table given on page 58 is divided into three years; each year is described with reference to its content and also with reference to the mode of instruction which is to be followed. The following translation from the official description of work to be given in the history of education will illustrate the minuteness with which each subject is described:

> In the history of education lifelike pictures are to be given of the most important periods and of those personalities which have been of the greatest significance in the development of instruction and training, especially in the volksschule. The period before the Reformation is to be described only in its chief outlines. More detailed presentation is to be given of the development of the schools during the last 400 years.[1] In this connection the student is to be introduced to a knowledge of the chief pedagogical writings. These are to be read either in full or at least in their more important sections. The reading may be required in part as private study rather than as classroom work. These readings are then to be discussed, and that which is of greatest significance in determining the school organization is to be emphasized, as well as that which is necessary to a complete understanding of the pedagogical significance of the writer in question. Mere memorizing of this historical material is to be avoided. The relation between these pedagogical writings and the civilization of the period in which they were written is to be pointed out, as also their relation to the present practices of the school.
>
> The history of education is to be brought down to the latest period. This historical study will then find its natural issue in a description of the present condition of the Prussian volksschule, as well as of those regulations which are of general importance or special importance for the particular area in which the students are doing their work.

The foregoing detailed description of the history of education is a part of the official regulations. Each subject is discussed at equal length. Perhaps it will be well to quote a part of another description which defines somewhat more concretely the work which must be taken by the student. This second subject will not be given in full; only the introductory sentences will be quoted. The subject in question is German.

> The purpose of instruction in German is to cultivate a readiness in oral and written use of the mother tongue. This instruction is also intended to acquaint the student with the most important elements of our literary history and to introduce him to the reading of the most important selections from this literature. Such contact with the chief masterpieces of our literature ought to arouse the patriotic spirit of the student and cultivate in him ability to give instruction in the German language in the volksschule.
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> The cultivation of the power of oral expression, both in expressive reading and in discourse, is an important function in all cases of the Präparendenanstalt and of the seminar. In the seminar, especially in the upper classes, it is recommended that the student be given practice in the free oral presentation of something that he has read or of some set theme. This theme can in many

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[1] Von Bremen, p. 216.

cases be advantageously chosen from the subjects of instruction other than general language.

In both of these institutions and in all of the classes there should be some instruction in prose as well as in poetical literature. There should be a general recognition of the relation of this literature to the religious connections of the pupils.

In taking up poetical literature attention is to be given to the explanation of content and to an explanation of the use which is made of words and to scansion, only in so far as these are necessary for a clear understanding of the selection. Above all, the effort should be made to cultivate a fine sense for the poetic significance of the passage.[1]

When one remembers that these details are presented in an official publication defining the function and course of study of the institution, it is realized how actively the central educational authorities concern themselves with the training of teachers. Furthermore, one finds here, as throughout the German system, the highest degree of uniformity as he passes from institution to institution, and he comes to realize how thoroughly the systematic training which has been given in the German schools has been developed into a scheme which prevails throughout the whole Empire. One may venture to quote from Dr. Kerschensteiner, one of the leaders in German education, the remark that there is the greatest degree of uniformity in the German system and this uniformity is not altogether to the advantage of the system. In contrasting Germany with the United States, Dr. Kerschensteiner calls attention to the fact that we have in America teachers and schools that are excellent and teachers and schools that are mediocre and poor. In Germany, on the other hand, the schools and teachers are so uniform in type that one hesitates to select any example as distinctly superior to the average. Dr. Kerschensteiner regards this as a disadvantage for Germany, since the best schools in a system which has wide variation always rise to the eminence of examples, whereas in a system where uniformity prevails there is danger that no vigorous moving forces will tend in the direction of improvement.

The problems of the course of study and the problems of teacher-training in these lehrerseminare are very different from the problems which present themselves in an American normal school. The difference can be understood only by considering the methods of instruction which are common in the volksschule itself. The pupils in these schools are not expected to study textbooks as are the children in American schools. Indeed, in most subjects there are no textbooks. The teacher of the subject is the source of information. This information is given in the form of an informal lecture; or in the primary grades through simple devices by which the teacher presents letters or words to the class. The exercise in either case does not depend upon any preparation at home. All of the work that is assigned to the children to do at home is in the nature of a continuation of what has been commenced in the class, and it is very little in amount. Furthermore, there are no study periods. All the lessons are presentation lessons. The teacher is thus called upon to take the place of the textbook, and his training must accordingly be very much fuller than is required of teachers in an American school where the children and teacher both derive their information from day to day very largely from some book which is in the hands of the class.

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[1] Von Bremen, p. 221.

A complete description of what goes on in a class in the volksschule should include also a statement of what follows on the lecture to which reference has just been made. After the teacher has covered a certain period of history, or has given a description of some country in the geography class, the pupils are called upon to reproduce all they have heard from the teacher. Sometimes half of the period is given to this catechising of the pupils, the exposition occupying the rest of the time. Often the lecture occupies more than half of the time. Usually the class exercise begins with some review of the work of the foregoing period.

This method of procedure makes a demand on both teacher and pupils for more continuous oral expression than is commonly seen in American schools. A teacher who has to talk for half an hour on a given subject must make a more elaborate preparation than is common in our schools. Furthermore, the children are sometimes called on to give a continuous narrative for three or four or five minutes.

Not only is the demand in each subject greater than that made upon American teachers, but the range of instruction demanded of each teacher is as extensive as the course of study in the schools. Every teacher must, for example, give instruction in religion, geography, history, the German language and literature, arithmetic, and nature study. In this wide range of subjects he must have preparation adequate to the presentation of the material demanded by the course of study. There is relatively little specialized or departmental work in the schools. Sometimes, if a teacher has special interests, the rector of the school may arrange for him to pass from class to class and give instruction in his specialty. But, in the main, dependence is placed on all of the teachers for all of the different kinds of work.

One especially interesting illustration of this general requirement of all teachers that they give instruction in all the subjects in the school is to be found in the fact that every student in his seminar course is required to be sufficiently skilled in music to conduct classes in this subject. He must learn to play the violin, so that he can always have at hand an instrument with which he can accompany the class exercises. The musical ability of the German people is recognized everywhere, and this requirement imposed on teachers in the volksschule goes far to explain the general training which the nation has in singing and instrumental music.

In the better institutions for the training of teachers the breadth of training required to meet the demands described is given by cultivating methods of use of libraries and source material. On the other hand, it is extremely difficult with students of the immaturity exhibited in many of the training schools to cultivate such habits of independent research; especially is this true in those institutions which draw their students from rural districts. These seminare often have to make shift with a body of men not qualified for the highest intellectual work. There is a grave danger, therefore, of dropping into mere formalism. The student gathers from the instructor, who teaches a given subject in the seminar, material which he carries over into the school without any very large modification. Furthermore, the ordinary teacher goes over and over again, year after year, the same material without any very great enlargement of his own horizon or of the information he offers students.

There is a movement in some parts of Germany at the present time for the creation of textbooks which shall supplement the work of teachers. The need for such textbooks is emphasized when one hears a teacher giving a class information about a geographical region which the teacher has never visited and about which he evidently has read very little. There is also danger of misinformation creeping into the instruction. This danger would be much less if the information were taken from a textbook which circulates through many hands and is subjected to the criticism of many people who are familiar with the subject treated in the book.

The training of teachers to enter schools conducted as the volksschulen are conducted would be altogether incomplete without much practice teaching. In order to meet this need every seminar has attached to it a practice school. This practice school is under the general supervision of the director of the seminar and under the immediate supervision of a member of the seminar faculty, who is delegated to take charge of the practice school. The actual teaching of the classes is performed by students who are members of the senior class of the seminar. There are no class teachers other than these candidates. Each of these practice schools is organized so as to give training not only for the regular graded schools of towns and cities, but also for what we should call the ungraded school of the country district.

A word of explanation may here be inserted in regard to the mode of organizing the volksschule in small towns and villages. There the children are not divided into the eight classes which would normally appear in a completely organized volksschule. In the smaller towns there are sometimes three divisions of the school. These three divisions or stages of instruction will therefore include children who in a fully graded school would be divided into a number of grades. Thus, in a three-room school all of the primary children are put together, the intermediate children are put together, and the higher-grade children. Indeed, in some of the smaller towns there are only two teachers for three such rooms. The little children come later in the morning, and the older children go away in the middle of the forenoon, thus making it possible for the two teachers by circulating among the three rooms to fill out the program of the day.

Evidently the students who are to be prepared for such schools as these must have training not only in the conduct of a single grade, but they must also have training in the conduct of whole groups of children belonging in different parts of the school. This requirement is still more obvious where, as is sometimes the case, candidates have to take charge of a whole school in a single room.

In order to prepare students for these different types of organization, the practice school of the seminar contains the various classes which the candidates would find in a fully organized school and also an ungraded class or a single room where children are put together in the way in which they would be found in a small rural school. The candidates are then required by actual contact with these different types of organization to acquaint themselves with the methods of giving instruction. The further conduct of the candidates' work is so fully described in the statutory requirements and in the annotations attached that a lengthy translation[1] may be indulged in as the best method of expounding the situation.

> The training of students in the seminar in practical school work begins in the second year. Throughout this second year the teachers of the seminar are to give model lessons in their several departments. These model lessons are to present all of the different forms of instruction in the subject in question. and in connection with the lesson itself there is to be an explanation of the method employed. After a model lesson has thus been presented, the same subject is to be taken up by the candidates, who will give trial lessons and submit to a criticism of the form and content of these lessons. In order that all forms of instruction may be adequately canvassed, compulsory exercises of this type are required throughout the year in religion, German, and mathematics. In the other subjects of instruction partial programs are to be presented through part of the year only, but in accordance with a fixed program. The time for these exercises in the different subjects will be taken from the regular time set down in the school program for each subject in the second year of training. For each practical exercise to be taught by students the whole class must prepare in writing, and during the actual class exercise several of the students may be called upon to take charge of the class. Atten-

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[1] Von Bremen, p. 216.

tion is to be given to preparation of the lessons in different departments so that in any given week students shall not be called upon to prepare more than two such trial lessons.

After the foregoing training in the second year, students who have reached the first year will be required to conduct every week throughout the whole year four to six periods of continuous instruction in the practice school under the direction and supervision of the seminar teachers. The only exception to this requirement is during the last weeks before the final examination. Opportunity should be given to each student in the seminar to give lessons in religion, German, mathematics, and at least one other of the subjects taught in the elementary school. At least three times a year a change shall be made in the assignments of the candidates. Each time this change is made, an examination is to be held by the seminar faculty in each class of the school. The candidates who have completed their work in any grade are to conduct classes before all other candidates. The director of the seminar sets the problems for this examination, and at the conclusion of the examination passes judgment on the work of each of the candidates.

Every departmental teacher in the seminar shall conduct weekly a period of instruction in which he sets forth all of the material in that particular subject which is to be taken up by the candidates during the next week, and also he shall during this period discuss the outcome of the work of the foregoing week. The candidates must prepare themselves in writing for each lesson which they give, and this work is to be looked over by the instructors in the various departments.

In addition, the director of the practice school, who is also to give instruction in at least one of the academic subjects in the seminar, shall hold as a rule weekly exercises for all of the students in the seminar. In these periods he shall discuss the teaching of the candidates and also all those matters which relate to school equipment and management. In this general exercise there shall also be a discussion of the discipline of the children in the school and reports of observations made by the candidates in regard to the characteristics of children in such matters as their natural ability, their achievements, their industry, their conduct, and their various individual peculiarities. The special methods of managing children with a view to these individual differences shall also be discussed.

Two hours of the school program shall be specially set aside for the demonstration lessons and for the trial lessons.

Furthermore, each candidate in the highest class shall visit the lessons given by other candidates in accordance with a prearranged program. It is especially desirable that candidates should visit instruction in those subjects in which they do not themselves give lessons. Provision should be made that every member of the highest class should come in contact for a period with instruction in the beginning reading class and in the beginnings of number work. A part of the time set down in the program for practice teaching should be given to this purpose. It should be carefully determined by examinations that every student who passes through the upper class of the seminar has cultivated before he leaves the institution adequate acquaintance with the method of beginning work in the fields designated.

Special methods in each of the different subjects are to be taught in detail by each of the departmental teachers. This instruction in method is to deal with all branches of the subject and with all of the different grades in which the subject is taught. It is to be illustrated by numerous concrete examples. The students of the seminar are also to be made acquainted with the chief books maps and other means of instruction and training, as well as with the sources from which they may derive material useful in the preparation of their own work of instruction and for their own further training. A brief statement of the history of methodology is also to be presented in its main outline.

At the conclusion of the whole curriculum a general review is to be given in pedagogy as well as in all of the subject-matter courses. During this review there will be a general summary of the content of the course organized under the different points of view which are appropriate to the subject.

At the conclusion of the course of study in the seminar, the candidates are subject to a rigid examination. It is possible for any one to present himself in this examination even though he has not passed through the regular seminar course. Since the examination is conducted, however, by the seminar faculty and is to be made more rigid for those who have not had regular training, it follows that very few candidates succeed in satisfying the examiners unless they have had the regular training of the institution. The statutory provision which allows outsiders to enter the teaching profession is therefore in practical operation of little significance.

The examination is conducted by a commission which in Prussia is under the direction of the provincial board and includes the full faculty of the seminar. The inspectors of the district are also ex officio members of the examining commission. If it is deemed desirable the minister of education may introduce other members into the examining board. Similar examining boards are organized in all the other States.

The examination itself consists of a written test followed by an oral test. The following details of this examination taken from the Prussion regulations are typical in most respects of the practice in all of the States of Germany. The written examination is made up of a thesis on the German language and literature, this thesis to exhibit both the candidate's mastery of the language and his preparation to give instruction in this subject. Second, there must be the preparation of a typical lesson in religion. Third, a paper is set involving the solution of three problems in geometry and arthmetic In like manner one question is set in history, one in nature study, and one in geography. Some candidates who have made special preparation in music and are to receive certificates, which indicate that they are prepared to give instruction on the organ, are examined on written music. Finally, a candidate may elect a foreign language, in which case an exercise will be given him in translating from the foreign language into German and the reverse. All of these written tests are preliminary to the admission of the candidate to the oral tests. The oral test refers to all of the matters that have been made the subject of instruction in the seminar. This oral test is intended to determine whether the candidate is able to give a clear and definite statement of matters which he has been studying. It may be omitted if his earlier examinations and his seminar record are of a high order of excellence. Finally, the candidate is required to pass a practical test in which he is to conduct a class of some subject for which he has been preparing several days in advance of the examination.

It may be well at this point to introduce a statement which will show how far some of the States depart from the example of Prussia. The American reader is commonly informed in reports on German schools that the practice of all Germany is like that of its largest State. This statement is misleading, if it is accepted as literally true. To be sure the example of Prussia is of great influence in determining the practices of the smaller States, but in some respects other States are in advance of Prussia. Thus Saxony, which in contrast with Prussia is a small, compactly settled, manufacturing district, has made certain advances which, so far as the lower schools are concerned, place that State distinctly in the lead.

For the purpose of justifying this digression and at the same time explaining in detail why the States do not for the most part accept each other's certificates, a statement will here be made of some of the variations which the States exhibit in the matter of examinations at the end of the training course.

In the State of Brunswick the final examination in various subject-matter courses is held a year before the candidate concludes this seminar course. These examinations, if passed, absolve the candidate from further academic examinations, but leave him to take the pedagogical examinations and the practical tests. Like arrangements prevail in Hamburg, Anhalt, Saxe-Coburg-Gotha, Bremen, Lubeck, Schwarzburg-Sondershausen, and several other States.

In point of test lessons Wurttemberg requires two class exercises to be conducted, one of which must be in physical exercise. Saxe-Weimar also requires two lessons to be conducted, but specifies that the candidate must show in these his ability to give religious instruction. Schwarzburg-Sondershausen requires two lessons, but does not specify the subjects. Most of the States require only one.

The time which is to be devoted to the examinations varies from the elaborate requirements in Saxony to six or seven hours or even less, which is required in Bavaria. The program in Saxony is as follows: (1) Preparation of a German exercise and the catechism, 10 days; (2) written examinations—arithmetic 2 hours, grammar 2 hours, Latin 2 hours, history 1½ hours, geography 1 hour, natural science and science of music 2 hours, making a total of 10½ hours; (3) oral examination—religion 50 minutes, catechism 20 minutes, psychology and pedagogy 50 minutes, German 50 minutes, history or geography 30 minutes, history of pedagogy 30 minutes, natural science or mathematics 30 minutes, making a total of 4 hours and 20 minutes.

In all the States if the candidate passes his examination, he is given a certificate which qualifies him to teach in the volksschule of the State in which he is examined, and he may now be appointed to a teaching position. This certificate does not, however, give the candidate a permanent position. After two or more years of service as a teacher he must take a second examination. In some of the States this examination may not be taken until the fourth year of service, and it is in some of the States further stipulated that the candidate must be 24 years of age when he presents himself for this examination. The second examination lays special emphasis not upon the subject matter of instruction, for the candidate is assumed to have passed examinations in these subjects in the first test. It is expected that at the time of the second test the teacher will be qualified by his experience in the schoolroom to show a higher degree of knowledge of methods of instruction, of school management, and of the theoretical subjects which relate to school activities. The second examination therefore lays special stress upon methods, school organization and management, and such fundamental sciences as psychology and pedagogy.

Candidates who pass this second examination now have a life position in the German schools in the Province in which they were trained. If the teacher wishes to secure a higher position, especially if he intends to become a candidate for the administrative headship of a school, he must take a third and fourth examination. The third examination qualifies him for the middle school, which is an advanced stage of the elementary school. In preparing for these middle school examinations and for the still higher examinations which admit candidates to the rectorship or principalship of elementary schools, candidates adopt various devices. They sometimes club together and secure instruction through their own voluntary organization. In some cases the municipality furnishes courses which are usually conducted by men who have already attained to the rectorship of some school. In still other cases the preparation is entirely private, undertaken by the individual candidate through his own initiative.

It may be noted in this connection by way of further digression that the teachers' organizations of Germany are wholly different in character from the associations which one finds in America and in England. Since the German teacher is a civil appointee, the teachers' associations can not in general take on the character of unions which they have in England, and they are not of the temporary and informal type which one finds in America. The subjects of interest which naturally arise in these teachers' associations are academic in character. One finds, therefore, that the stronger teachers' associations, especially in the larger cities, very frequently maintain libraries and even laboratories for the experimental study of educational problems. Through the promotion of these strictly academic interests the teachers' associations are able to offer large educational opportunities to their members. Furthermore, the social side of the German teachers' organization is also frequently emphasized. The *Verein*, as it is called, sometimes builds a house which is to be compared to an American clubhouse, where all sorts of educational committees can meet and activities of a social character can be centered, and where the library and other academic interests are also housed.

The teachers of each of the States of Germany are paid according to an official schedule of salaries which advance steadily with the increasing experience of the individual teacher. Again selecting Prussia as the type, it was found some years ago that a uniform salary list for all parts of the State was inequitable, because in certain of the rural districts living is relatively cheap, while in the large cities and towns living is more expensive. In order to meet this difficulty the scheme was adopted of paying a teacher in addition to his regular salary a rental allowance. In order to adjust this rental allowance, places are classified into several different grades, each grade being supposed to have a uniform economic character. The lowest grade gives the teacher a small rent allowance, while the highest grade of position in the large cities pays a considerable addition to the teacher's salary for the purpose indicated.

Salary schedule—Increments with years of service.[1]

	Beginning salary.	7 years.	10 years.	13 years.	16 years.	19 years.	22 years.	25 years.	28 years.	31 years.
	Marks.	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*
Increments	....	200	200	250	250	200	200	200	200	200
Totals	1,400	1,600	1,800	2,050	2,300	2,500	2,700	2,900	3,100	3,300

Special provision has to be made for teachers in technical subjects. In many cases teachers of these special subjects are employed without the full training demanded of the regular class teachers. Thus the teachers of woodworking and the teachers in the technical continuation schools are very frequently mechanics with only a little special pedagogical preparation.

There has recently been founded in the city of Berlin an institution for the training of technical teachers, but for the most part this phase of the profession has not been fully developed. The situation is somewhat relieved by the fact that in many of the continuation and technical schools the teachers are on part time and are persons who are otherwise engaged in the elementary schools as regular teachers and have qualified themselves by private training to give lessons in the special technical subjects to which they devote a part of their time. Where a technical school needs the whole time of a teacher, it is not uncommon for this teacher to be sought in the staff of a regular elementary school. The total number of technical teachers who are without special training is therefore relatively small.

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[1] Monroe's Cyclopedia of Education, vol. 3, p. 71.

So far as the work for girls is concerned, the domestic subjects are usually added by the taking of special courses to the training of a regular woman teacher.

As indicated in the introductory paragraphs, the training of teachers for the secondary schools is entirely distinct from the training of teachers for the volksschule. Candidates for positions in the secondary schools must first of all have completed the course of one of the secondary schools. In the second place, the candidate must have attended a German university for at least six semesters. Here an exception is made in the case of those candidates who expect to teach in the sciences. They may take half of the university courses in one of the technical institutions rather than in university lectures.

After this preliminary training is completed, the candidate presents himself for an examination. Usually the period of training is much longer than the minimum above described. Indeed, in most cases candidates take the university doctor's degree before they come up for the examination. The examination consists of two parts. First, there is a general examination covering those subjects which are supposed to be essential as training for all departments; and, second, there is a special examination given in the particular subject in which the candidate is preparing to teach. Both examinations include written and oral divisions.

The general examination includes the subjects of philosophy, pedagogy, and German literature. If the candidate belongs to a Christian denomination, he will be examined in religion. The special examinations are in the following subjects: Christian religion, philosophical propædeutics, German, Latin, Greek, Hebrew, French, English, history, geography, pure and applied mathematics, physics, chemistry and mineralogy, botany and zoology, and under certain circumstances Polish and Danish.

Each of the special subjects except Hebrew is subdivided into a higher and a lower division. Candidates who pass only the lower division of a subject are regarded as prepared to give instruction in that subject only in the lower classes of the secondary schools, while candidates who pass in the upper division are recognized as qualified to give instruction in all classes. This division may be illustrated by giving in full the description of the requirements in German.

For the lower division of German when taken as a special subject—

> the candidate is required to have a definite knowledge of the elementary grammar and history of modern high German. He must have a thorough detailed knowledge of the classics written in the modern period of this language, especially of the works which are suitable for use with students in the schools. He must have an acquaintance with the evolution of the modern high German literature. Furthermore, he must have a knowledge of the outlines of rhetoric and prosody, and of the ancient and Teutonic legends which are important for use in the schools.[1]

For the higher division of this subject—

> the candidate is required in addition to the above to possess a sufficient mastery of middle high German to make it possible for him to read without hesitation easy selections, and to explain the grammatical structures and word forms encountered. He must possess a full knowledge of the evolution of German literature during the middle high German and modern periods, and must give evidence of extensive readings from these periods. He must have a full knowledge of poetical forms and meters, and of those principles of rhetoric which will qualify him to direct the preparation of German composition in the higher classes of the secondary schools. Finally, the candidate will be examined, in accordance with his own election, either in historical grammar and the elements of Gothic and old high German, or in the introduction to philosophy.

Each of the special subjects is similarly subdivided, and it is stipulated that the candidate must pass both divisions of some one of the subjects and the lower divisions of two others. Furthermore, certain combinations are required. For example, if a candidate takes Latin for his complete subject, one of his partial subjects must be Greek; if he wishes to take applied mathematics, he must present pure mathematics. These required combinations are intended to guarantee some acquaintance with those fields of knowledge most closely related to the candidate's principal subject.

The examinations are formidable ordeals. They are conducted by special commissioners. On these commissions are university professors, officers of the education department, and representatives of the secondary schools. The candidate is first required to present two elaborate theses, one on some phase of the general subjects and one in the subject in which he has elected to take a complete examination. At the discretion of the commission the candidate's doctor's dissertation may be substituted for one of these theses. A period of 16 weeks is allowed for their preparation, and they are intended to show the ability of the candidate to carry on independent research in his selected field, and his ability to formulate material in a clear and systematic fashion. After the presentation of these theses there follows a written examination, followed in turn by an oral examination.

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[1] Brier, p. 523.

After the examination the successful candidate now has before him two years of contact with the schoolroom before he can become a teacher with a regular position. The first of these trial years is known as the Seminar year and the second as the Trial year. During both of these periods the candidate is connected with one of the secondary schools and is under the general direction of the principal or director of this school.

It will be noted that the institutional method here adopted for training candidates is altogether different from that which is adopted in the training of elementary teachers. There is no separate institution for the training of teachers for the secondary schools, but the secondary schools are themselves used as the means for recruiting the faculties. Germany is in this respect altogether unique.

It would not be possible to carry on the system which exists in Germany if it were not for the fact that the members of the faculties of the secondary schools, and especially the principals, are men of the highest intellectual qualification. Many of the directors of the German secondary schools have had a training equivalent to that of members of the university faculties. Many of these men have a national reputation in the departments in which they specialize. A good deal of research work is carried on in the laboratories of these secondary schools, and in general it may be said that the intellectual life within the walls of a German secondary school is of a type which fosters both scholarship in special departments and a general devotion to problems of higher education.

Not all of the secondary schools of Germany are utilized for the purpose of training teachers. It does not seem possible to lay down any general principle on which institutions are selected for the training of candidates. The minister of education designates the institutions which are to be so employed, and his judgment is based on a variety of considerations. The ability of the director to take charge of candidates and direct them in their training is in a general way the ground of this selection. The different directors follow a great variety of plans, however, so that it is obvious that the minister of education has no single formula which he wishes to enforce for the training of candidates.

After a candidate has been assigned to a particular school, it becomes his duty, first of all, to participate in the activities of that school in any way that he can. He is usually assigned to some teacher, whose reports he helps to prepare and whose classes he has to visit with regularity. In addition, he is expected to visit all of the classes in the institution, so as to observe different methods of instruction and class management. It is required that the candidate meet with the director two hours a week for special training. At this point in particular the greatest diversity of practice appears. Before commenting in detail on the actual practices exhibited at these weekly meetings, the following statement may be quoted to indicate the requirements which are officially set down in Prussia for these meetings:

> The subject matter which is to be covered in these conferences is as follows:
>
> Principles of training and instruction, together with their applications to the general problems of the secondary schools, and with special reference to the conduct of the subject in which the candidate is preparing to teach.
>
> Historical survey of the evolution of secondary schools, including an account of the leaders in pedagogy and also including comments on the most important present-day situations in the educational world.
>
> The constitution and organization of secondary schools, the official course of study and regulations regarding examinations, the rules regarding student credentials and promotion.
>
> Principles of school discipline illustrated so far as possible by current examples, and by discussions of examples of a concrete type which have come up in the school at other times, rules of conduct for students, discussions of the relation between school and home.
>
> School hygiene with special reference to equipment of the classroom and to the conduct of the class work.
>
> The description of supervisory authorities, rules, and regulations governing the official relations of the teacher and school officers, including the forms of official communications and reports.
>
> Finally, the conferences shall furnish the occasion for supervision of the visits made by candidates to classes; for supervision of the preparations for instruction made in the subject which the candidate is himself to teach, of the methods of correcting and handing back the work of students; and for discussion of the personal or other aspects of the trial teaching of candidates.

Reports may be required of the candidates.

At each conference one of the candidates is designated to prepare very full minutes of the proceedings. These are kept as a formal record of the work done at the conference and are read at the opening of the next meeting.

In practice, the different directors manage their candidates very differently. Sometimes the meeting is conducted as a demonstration lesson; sometimes it is a discussion; sometimes it is a series of reports by candidates; sometimes a lecture by the director or one of the teachers of the school. Perhaps the best method of describing these practices will be the presentation of some of the concrete experiences of the writer in visiting a number of these conferences.

In a *Real Gymnasium*, where the director was a specialist in physics, one of the candidates conducted an exercise which may be described as a demonstration lesson. He stood at the laboratory desk and presented in brief outline the material which he would use in three or four lessons. The material was not presented in detail, but it was demonstrated far enough to show the method of carrying out the experiments and the discussions which would be connected with these experiments. After the candidate had thus presented his material for something more than half an hour, he was called on to defend his presentation in the face of criticism from all the candidates and from the director. During this criticism period matters of personal bearing and general appearance were commented upon as well as matters of presentation. The mode of handling apparatus and demonstrating results was fully discussed. The candidates who attended this meeting were all specializing in natural science and mathematics. They had been attracted by the widely recognized ability of the director in training for such lines of teaching. The director was very vigorous in his assertions that he regarded lectures on school methods and management as of very little value. To his mind the business of the weekly conference with candidates is to train them in methods of actual classroom work. Furthermore, he regarded it as the business of the candidate to furnish the material for discussion.

A second meeting in another institution was devoted entirely to a discussion of matters of management of the students. How to prepare a report and when to hand it in; how reports should be presented to students and how difficult cases should be administered; how students should be punished for various offenses—these were the subjects of discussion. At this meeting it was very obvious that the director insisted upon rigid conformity to the rules of the school and that each instructor was expected to know these rules thoroughly and to carry on the routine exactly as it is carried on in the other classes of the school. The candidates, it will be remembered, had had some practical experience through association with the teachers in the classes which they had visited. The management of the reports for which the candidates were responsible was the subject of pointed personal comment.

A third type of conference was strictly departmental. In this case the director instead of conducting the exercise himself had called in one of the members of the faculty to meet the candidates. In this particular case the instructor was discussing the methods of teaching modern languages. At later meetings of the same group, other departments would be represented by other members of the faculty. The early part of the meeting in question was devoted to a presentation by the teacher in lecture form of the aims of language instruction and a general discussion of the mode of approach. This general presentation was followed by a discussion on the part of the candidates carried on in the form of questions and answers. The candidates contributed to the discussion by referring to their own experiences and by quoting articles and books which they had read. Especially was it noted by some of the candidates that they had become interested in methods of teaching foreign language that differed radically from that which had been described in the major presentation. The teacher who had charge of the exercise defended his position vigorously.

A fourth mode of dealing with candidates was observed in the school where the director lectured without interruption to the candidates on the history of education. There was no effort to relate this discussion to the work of the school as the candidates had been observing it. One was reminded rather of a university exercise in which a large body of material is passed over in the lecture without any effort to give the practical applications. In this case the candidates were required to take notes and were supposed to do some outside reading, although it did not appear in the single exercise that the outside reading was tested in any way. This kind of a meeting is probably rare. The official directions explicity warn against it.

Variants on the above types of method were observed in other cases. Sometimes the candidates present reports on articles. In some cases the articles selected have a direct pedagogical flavor; in others they are purely subject-matter articles. In the latter case, the effort is sometimes made to bring out in discussions the pedagogical significance of the article; sometimes the subject is passed over without any such efforts to apply the work to the schools.

Such diversity in the practices of different schools is the natural outgrowth of the fact that each school deals only in a secondary way with the training of teachers. The chief function of the school is to teach the students, and the weekly meetings of candidates constitute a mere side issue in the life of the director. The general result is that there is no group of men in Germany who have it as their primary function to study the problem of training secondary teachers. Even the universities, with their theoretical courses in education, lack the practical stimulus of responsibility for the development of pedagogical principles for secondary schools.

Indeed, the situation is altogether remarkable. Here is a school system which more than any school system in the world requires a rigid and most elaborate training for its secondary teachers but is able to contribute little or nothing to the objective science of secondary education.

When one visits the universities of Germany, he finds the work in education very little developed. What is given is for the most part theoretical or introductory, taking the form of history of education, psychology, or philosophy. There is little respect for the few studies which are made of current educational practices and their results; and there is no social pressure in the direction of a systematic study of schools. Some of the teachers' associations, as previously noted, have attacked the problem of the scientific study of education. The Lehrerverein of Leipzig supports a laboratory for experimental investigations. In the Institut of Hamburg, Meumann conducts a laboratory for experimental pedagogy; and in two or three of the other university centers there are the beginnings of research. In the main, however, the practical training of teachers is the all-absorbing function of the professional educators. The volksschule has no relation to the universities, and the secondary schools have their own system of dealing with the problem. Nowhere is there any higher center to which all educational interests may appeal for the development of methods of investigation. The German system of training teachers turns out on examination to be a subdivided, conservative plan, complete in its administrative organization, but lacking in the motives which stimulate evolution in the direction of a systematic scientific study of its problems.

From this digression, we return to the description of the career of the teacher-in-training. After the candidates have gone through a part of the first year's training and have become somewhat familiar with the methods of instruction in the classes which they visit and through the advice which they receive in the weekly meetings, they are allowed to give instruction. At first this instruction is limited to single class exercises under the immediate supervision of the regular teacher. The candidate is expected to prepare fully for such an exercise, so that he may carry on the work of the students in accordance with the general plan adopted by the regular teacher. The regular teacher remains in the class during the instruction given by the candidate, and after the class has been dismissed the teacher gives the candidate the benefit of such criticism as he has to make. Opportunity for these criticisms is presented by the school program, which is uniformly so arranged that 45 minutes of class work are followed by 15 minutes of recess. The criticisms are in some cases very helpful, especially where the teacher is interested in developing better methods of instruction upon the part of the candidate. On the other hand, the criticisms are often very severe and sometimes even caustic. In any case, the candidate learns through the comments given him by the teacher how far he has failed to conform to the expectation of the school.

This method of training candidates tends to make the higher schools very conservative in their modes of presenting subjects. Obviously, a candidate who is teaching before the regular teacher and knows that his efforts are to be followed by 15 minutes of criticism is not likely to depart very radically from the methods he has observed in operation in the same class in earlier exercises. It is not likely, furthermore, that a candidate who has thus conformed strictly during his period of training to the practices of the older generation of teachers will break away from these cultivated practices when he himself becomes an independent teacher of classes.

Here, as in the case of the volksschule, the method of instruction is very largely the lecture method, followed by questions. The manner of some of the teachers in their treatment of students is often very severe. This can be readily understood when it is remembered that the higher schools of Germany exercise in a very high degree the function of selecting from the student body those who are scholastically most competent. There are now in the secondary schools of Germany more students than can be accommodated in the universities and technical schools. Furthermore, the military privilege, which students acquire by completing a part of the course in these schools, is so much sought after that the school can enforce the most rigid standards of work. The general fact commented upon in connection with the volksschule, that the teacher is a permanent appointee of the State and does not need to concern himself in any way with the attitude of the patrons of the school, also helps to explain why the teachers in the higher schools feel at liberty to discipline the class with the greatest severity if the students do not satisfy them in their work. The tension observed in one of the classes of the higher schools is not paralleled by anything to be found in American schools. Students and parents alike are aware of the great importance of the judgment of the teacher. A student who has been censured by the teacher recognizes that this censure means much to his future career, and he takes it very seriously.

The candidates, who are rapidly initiated into this system of teaching and discipline, very soon feel the importance of their office, both by virtue of the example which they see set before them by the teacher and also because of the confidence which they soon acquire in the conduct of classes. It is to be remembered that the regular teacher is always present in these classes, and consequently the ordinary questions of discipline, which sometimes arise in the case of substitute teachers, very seldom arise when candidates are on trial. This is true in spite of the fact that the regular teacher often interrupts the instruction of the candidate, taking the class out of the hands of the candidate or modifying some detail of the lesson. Such interruption of the candidate does not seem to disturb the discipline of the class. This fact bears eloquent testimony to the control which the organization has over students. At the same time, when one considers the matter in its relation to the training of candidates for teaching positions, he is equally impressed with the strength of the system in enforcing conformity to the traditional type of instruction.

Several weeks before the close of the seminar year each candidate is called upon to prepare a thesis on some concrete pedagogical or didactic problem set for him by the director. This thesis constitutes part of his preparation for the teaching profession and may be the outcome of his readings or the outcome of his observation. Not uncommonly the candidate makes an elaborate study of some of the pedagogical literature related to his subject. It is to be remembered that many of these candidates have already completed the work for the degree of doctor of philosophy in the university and are for that reason trained in the methods of research and in the preparation of theses, while all have prepared elaborate theses in connection with the examinations which admitted them to the seminar year.

At the end of the seminar year the director, with the cooperation of the other teachers who have observed the work of the candidate, makes a report to the school authorities, and if the work of the candidate has been satisfactory he is now advanced to a higher grade and enters upon the trial year.

During the trial year he is required to teach six to eight hours a week without compensation. If he is especially fortunate, he may receive some compensation for substitute teaching which is needed by the school. In the main, however, he is called upon to carry a heavy burden of work without any compensation from the school. The director may also use his services for other purposes, such as the preparation of reports, the checking of lists, and other duties which need to be attended to for the purpose of administering the school. During this trial year the regular teacher is not required to attend the classes conducted by candidates. The candidate, therefore, gradually acquires independence in his conduct of the classes.

At the end of this trial year another report is made of the activities of the candidate and the judgment of the teachers in the school with respect to his success. If this report is favorable the candidate is now put on the eligible list and may be appointed to a permanent position. The length of time which it is necessary for him to wait for this permanent appointment is determined wholly by the needs of the schools. If there are no vacancies, the candidate may wait a relatively long period of time, in some of the cases as long as four or five years. On the other hand, for some years past it has been possible in most cities for candidates to receive appointment almost immediately on completion of the trial year.

Credentials secured in one State serve to admit candidates to teaching positions in other States, provided explicit arrangements to this effect exist between the States in question. This transferability of certain credentials for secondary schools is in sharp contrast with the practices in regard to elementary schools. There, as has been pointed out, credentials are for the most part not transferable.[1] This situation grows out of the fact that all of the secondary schools of the Empire have been standardized for the purpose of administering the military privilege, which is under the Central Government. This uniform standard makes it easily possible for most of the States to interchange credentials in so far as these credentials relate to the secondary schools.

The following table shows the number of secondary teachers in the German Empire and something of the conditions under which they do their work:

Higher schools in the German Empire, 1911.[1]

	Gymnasien.	Realgymnasien.	Oberrealschulen.	Progymnasien.	Prorealgymnasien.	Realschulen.	Other incomplete schools.	Vorschulen united with higher schools.	Mädschengymnasien.	Hönere Mädschenschulen.
Number of institutions	524	223	167	81	63	411	218	413	39	789
Number of teachers	9,769	3,708	3,473	570	384	4,265	772	1,239	[2] 432 [3] 607	[2] 2,580 [3] 8,779
Number of teachers fully trained	8,671	3,153	2,857	501	295	3,228	368	14	[2] 335 [3] 146	[2] 1,594 [3] 950
Number of students	160,237	70,357	75,832	9,509	7,252	89,968	14,489	49,690	22,137	212,324
Number completing course in last year	10,300	2,907	2,452	......	......	......	......	......	242	2,051

[1] Statistiches Jahrbuch f. d. Deutsche Reich, 1913, pp. 402 et seq. [2] Men. [3] Women.

The salaries paid to secondary-school teachers are higher than those paid to elementary-school teachers. The following table presents the facts for the secondary schools of Prussia and may be compared directly with the table presented on page 73 for elementary teachers:

Salary schedule—Increments with years of experience.[1]

	Initial salary.	3 years.	6 years.	9 years.	12 years.	15 years.	21 years.
	Marks.	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*
Increments	....	700	600	700	600	600	800
Total salary	2,700	3,400	4,100	4,800	5,400	6,000	7,200

[1] Monroe's Cyclopedia, vol. III, p. 71.

A rental allowance is added to this salary in the same way as in the case of elementary teachers. Teachers who have served up to their sixty-fifth year are pensioned, and all appointments are for life.

The training of women teachers for the higher girls' schools is not as elaborate as that required for the men. The following table presents a course administered by the seminar for teachers in higher girls' schools:

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[1] Von Bremen, pp. 360 et seq.

Course for women teachers for higher girls' schools.[1]

Subjects.	Academic continuation classes.				Practical year.
	III.	II.	I.	Total.	
Academic:					
Religion	3	3	3	9	1
Pedagogy	2	2	2	6	3
German	3	3	3	9	1
French	4	4	4	12	1
English	4	4	4	12	
History	2	2	2	6	1
Geography	2	1	1	4	
Mathematics	4	4	4	12	1
Natural science	2	3	3	8	1
Method and model lessons			(4)		4
Practice teaching					4-6
Research work					8
Technical:					
Drawing	2	2	1	5	
Singing	1	1	1	3	
Gymnastics	3	3	3	9	3

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[1] Güldner, p. 19.

BIBLIOGRAPHY OF OFFICIAL AND SEMIOFFICIAL PUBLICATIONS USED IN PREPARING THIS REPORT.

Bestimmungen vom 1 Juli, 1901, betreffend das Präparanden- und Seminarwesen, etc. Halle, a. d. S., Verlag der Buchhandlung des Waisenhauses, 1912.

Bund für Schulreform, Arbeiten 6. Leipzig und Berlin, B. G. Teubner, 1913.

Bund für Schulreform, Vorbericht. Zweiter Deutscher Kongress. Leipzig und Berlin, B. G. Teubner, 1912.

Contains the same material regarding training of teachers as foregoing.

Dienstanweisung für die Direktoren (Direktorinnen) und Lehrer (Lehrerinnen) an den höheren Lehranstalten für die weibliche Jugend in Preussen. Halle, a. d. S., Verlag der Buchhandlung des Waisenhauses, 1912.

Die höheren Schulen in Preussen (für die männliche Jugend) und ihre Lehrer. Adolf Beier. Halle, a. d. S., Verlag der Buchhandlung des Waisenhauses, 1909.

Die höheren Lehranstalten für die weibliche Jugend in Preussen. Dr. Hans Güldner. Halle, a. d. S., Verlag der Buchhandlung des Waisenhauses, 1913.

Monroe's Cyclopedia of Education. Vol. III, article Germany.

Die Ordnungen für die Prüfung, für praktische Ausbildung und die Austellung der Kandidaten des höheren Lehramts in Preussen. Wm. Fries. Halle, a. d. S., Verlag der Buchhandlung des Waisenhauses, 1912.

Die Preussische Volksschule. Gesetze und Verordnungen. E. von Bremen. I. Stuttgart und Berlin, G. Cotta'sche Buchhandlung Nachf., 1905.

Statistisches Jahrbuch für das Deutsche Reich. Herausgegeben vom Kaiserlichen Statistischen Amte. Berlin, Puttkammer & Muhlbrecht, 1913.

Statistisches Jahrbuch für den Preussischen Staat. Herausgegeben vom Königlichen Preussischen Statistischen Landesamt. Berlin, Verlag des Königlichen Statistischen Landesamts, 1913.

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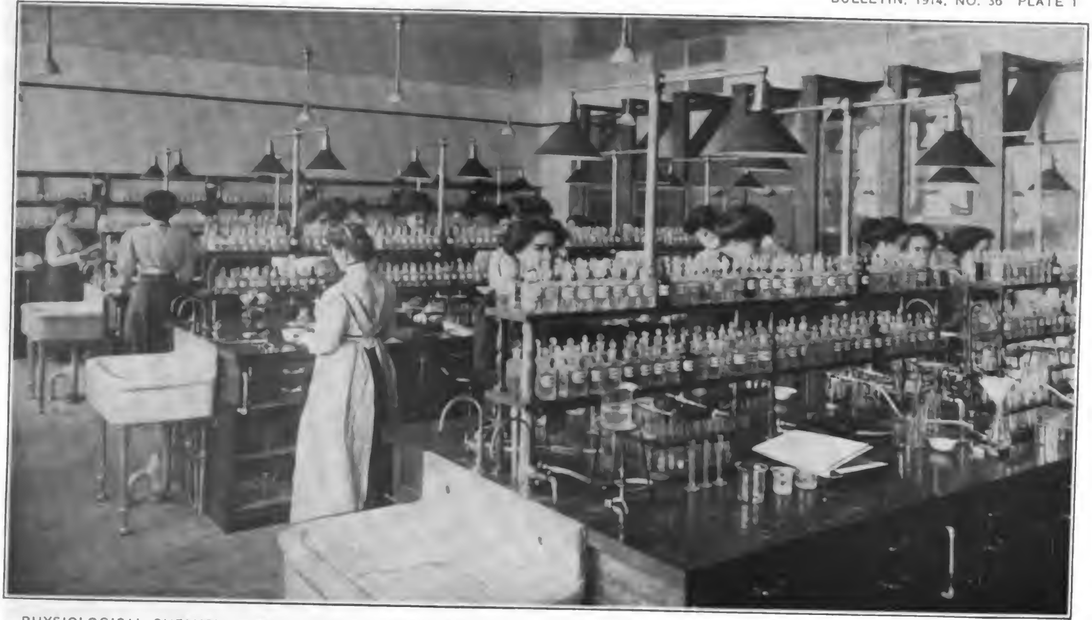

PHYSIOLOGICAL CHEMISTRY LABORATORY.—DEPARTMENT OF HOUSEHOLD ARTS, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK CITY.

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EDUCATION FOR THE HOME

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PART I

INTRODUCTORY SURVEY
EQUIPMENT FOR HOUSEHOLD ARTS

DEPARTMENT OF THE INTERIOR

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has done, with the help of several of the best-known teachers of this subject in different parts of the country. The manuscript is now ready for publication, and I recommend that it be published in four parts as bulletins of the Bureau of Education, with the general title of "Education for the Home;" Part I—Introductory, Equipment for Household Arts; Part II—The States and Education for the Home, Rural Schools, Elementary Schools, Secondary Schools, Normal Schools, Technical Institutions, Various Organizations and Agencies; Part III—Household Arts in Colleges and Universities; Part IV—Lists of Schools, References.

Respectfully submitted.

P. P. CLAXTON,
Commissioner.

To the Honorable the
SECRETARY OF THE INTERIOR.

EDUCATION FOR THE HOME—PART I.

INTRODUCTORY SURVEY.

Education for the home presupposes that the schools shall add to general education a preparation for various fields of useful service, and among them that of homemaking and household management. Common-school privileges have now been secured for every child; that every child shall also be prepared for efficient vocational service in some chosen field is the program of the new education. This new program will not reduce the present general training of the individual, whether this is now limited to the elementary school, high school, or college. Its fundamental principle is that there shall ultimately be provided, in addition to the general education which the individual now secures, specific vocational training for some definite field of useful activity, whether trade or profession. In such a program, preparation for the management of the home is obviously an important element.

An educational system that gives vocational preparation for the higher professions alone is socially indefensible; such a limitation may be for a time necessary if society can not afford more, but a progressive society can not afford to rest until everyone who serves, whether his station be high or low, is equipped by special training for efficient service. The public is fast adopting this conclusion; extensive programs of vocational training have already taken form in many States and are under consideration elsewhere. The older education, of course, did not entirely lack a vocational element; it led some to the higher professional schools, and those who did not go beyond the lower schools applied the knowledge there secured in business, in the home, and elsewhere. There is, however, a new vocational emphasis to-day in the older education as well as in the education called vocational, and the home is to be one of the chief beneficiaries of this changed point of view.

This report brings together facts regarding education for the home in American schools of various grades from the elementary school to the university, and also statements regarding certain supplementary agencies and organizations whose work is in this field. The particular section of the report presented in this bulletin contains an introduction to the study, brief statements of certain of the findings, and a list of equipment for household-arts work.

A basis for a rational appreciation of the home is laid in the kindergarten, and the kitchen garden has been adopted, especially in social enterprises, as a method of teaching household processes by toys and games; in the public schools and in higher institutions the program of education for the home has been fairly well agreed upon, and is going into effect somewhat as follows:

In the lower grades of the elementary school household arts is to be taught to both boys and girls as part of their general education, but with no vocational aim; in the last grades of the elementary school, vocational training in the household arts will be given to girls whose education is to end with the elementary school, and some required training will be given in these grades to all girls. In the high schools, 1,350 of which now give household instruction, a minimum course in household arts will be required of all girls, whether in college preparatory work or in the various vocational curricula, while vocational courses in household arts or homemaking will be provided for those desiring to secure serviceable efficiency for the field of the household.

For girls who live in the open country equivalent opportunities will be provided, since education for the rural home, including woman's supplementary wage-earning vocations, has been an almost invariable accompaniment of vocational training in agriculture. Household arts is going even into the rural district school. Often the rural teacher provides domestic training in connection with the preparation of a warm lunch; much is done by visiting supervisory teachers; and still more definite progress is made possible by the consolidation of districts. Education for the rural home is benefiting by the establishment of special secondary schools for agricultural and household education, by the organization of the boys and girls of the country in contest clubs, by the development of rural community centers about the schools, and by other progressive measures in the results of which the home shares.

Of the State normal schools two-thirds at least have organized household-arts departments, and over half of these require a minimum amount of instruction in this field of all students intending to teach. The training of special teachers of household arts is provided in many normal schools. In other institutions for preparing teachers, in the city training schools and in training classes in high schools, the subject of household arts is included in the curriculum, so that the regular schoolroom teacher will be prepared to impart something of the arts of living in connection with her regular instruction.

The technical institutes, usually in advance of the secondary schools in their program of vocational courses, have naturally provided vocational courses related to the home. They have contributed much to the training of teachers in this field.

Of the colleges and universities, over 250 report definite courses of instruction in household science, enlisting 7,500 college students; and 37 other institutions which offer no such courses report that related instruction is offered in their scientific departments. The collegiate instruction varies from courses related to the home, offered as elective subjects, to definite curricula in preparation for teaching household arts, for household management and home making, and for industrial and professional applications of household arts, as in institution management, dietetics, lunchroom management, house decoration, costume design and dressmaking, and other fields.

Among the most important items of this program in home education are the plans for reaching the home women with knowledge of better housekeeping. For this the prime agency is the continuation school of household arts, which will provide daytime classes for a few hours a week for young women who have left school and are now at home or in employment, especially also for young matrons and young mothers who need first aid in housekeeping and child care. Similar instruction may be given, though less advantageously, in evening classes. For the mature woman of the open country there seems most promise in the movable schools of homemaking meeting for a week or more in a community, and in the visiting household demonstrator, already foreshadowed by the farm demonstrators and actually at work in one or two places. These agencies will supplement with intensive instruction the work of farmers' institutes for women, the usual extension work of the agricultural colleges, and the various public and voluntary agencies of home improvement. In this connection the Lever-Smith bill just adopted, providing for Federal aid for extension work in home economics and agriculture, has great promise for the development of home-betterment work for the country. In the cities many agencies are working to the same end—the visiting housekeeper and household teacher, the social center, the model housekeeping flat, the settlement, the Young Women's Christian Association, women's clubs, and similar organizations. Some of these agencies—for example, the Young Women's Christian Association—are reaching the country as well as the town.

There remain to be mentioned the Government agencies, other than the schools, which directly benefit the home, as the nutrition investigations and the food-control work of the United States Department of Agriculture, the home-education division of the Bureau of Education, the Children's Bureau, the Public Health Service of the Federal Government, and those administrative divisions of State and municipal governments which aid society by aiding the home; also the many professional, scientific, and social-betterment organizations the purposes of which concern the home.

Section 1. THE BEGINNINGS OF AN EDUCATION FOR THE HOME.

An informal education for the home began with the first home, and the formal training for home duties has probably a greater antiquity than we think. Socrates's unfading picture of the young Greek, Ischomachus, giving directions to his wife, as related for us by Xenophon in the Oeconomicus, hints at the home instruction which Greek boys and girls doubtless received, and which any cultivated people must provide if its complex round of household living is to be taken up readily by the new generation. The medieval convents must have been schools of exemplary housekeeping. The placing of young women of better-bred families with some lady of the castle, just as her brother went as page to a school of knighthood, and the training of the daughters of the common folk in service at the hall or court, made something of a school of household work and ways in the Middle Ages. The renaissance of classic learning stimulated housekeeping, as it did everything else, and the Florentine architect, Alberti (or was it Pandolfine?), rewrote Xenophon for his day as the "Tratto del Governo della Famiglia," a valued discourse of a father and his sons regarding household wealth and management.

The Renaissance brought in a new society, and its educators, Comenius and Luther especially, found a place in school theory, even if practice did not yet yield ground, for the common activities of home and farm; perhaps the textbooks of Comenius were the first school books to recognize household activities as proper subject matter for school discussions. The philanthropinists of the eighteenth century believed in such training, as did Pestalozzi, a practice that spread to some extent in the philanthropinic schools of Germany, the charity schools of England, and in the monitorial systems of Lancaster and Bell. Needlework, as samplers, lace and embroidery, had long been part of the private-school education of girls—as accomplishments, rather than practical arts. The Ursuline nuns at Quebec had taught cooking and sewing to Indian girls as early as 1668. In the American colonies girls had needlework much as in England, but the household as an end in education did not get much of a hearing, in Europe or America, until 1850, or even 1870.

The early domestic economy movement.—The demand for the hearing came nearly 50 years earlier, however, when it was voiced in America by two leaders in girls' education, Mrs. Emma Hart Willard and Miss Catherine E. Beecher. Mrs. Willard had a famous private school for girls at Middlebury, Vt., whence she launched in 1818 her "address" to the New York Legislature pleading for a State grant for girls' education comparable to that given boys' education, which would provide permanence of plan, necessary buildings, equipment, and faculty. In connection with this plea she outlined her plan of a curriculum that should include "domestic instruction." Mrs. Willard wrote:

> It is believed that housewifery might be greatly improved by being taught, not only in practice, but in theory. There are right ways of performing its various operations; and there are reasons why those ways are right; and why may not rules be formed, their reasons collected, and the whole be digested into a system to guide the learner's practice?

Mrs. Willard discovered domestic economy as a subject of instruction; Miss Catherine Beecher developed the idea, and to her we really owe a large debt. Miss Beecher maintained a private school at Hartford, Conn., from 1820 to 1832, and afterwards with her sister, Harriet Beecher Stowe, another school at Cincinnati. Her life work as educator, author of textbooks, and leader in social movements—for women as teachers, for the higher education of women, for moderation in the antislavery crusade, for hygienic and health reforms, for attention to domestic economy, and finally against the suffrage for women—made her a national figure from 1830 until her death, in 1878. She constantly urged a high place for domestic economy in the education of girls. In 1841 she did the practical thing that made its teaching possible; she wrote an excellent text on the principles of household management, which was issued under the title, A Treatise on Domestic Economy. The book was republished year after year, was added to the Massachusetts district school library, used as a textbook in schools, and with its companion, Domestic Receipt Book, was for a generation the standard work on the household. Even to-day these books, or their revisions, published 1869–1873, The American Woman's Home, or Principles of Domestic Science, New Housekeeper's Manual, etc., by Miss Beecher and her sister, have real worth, concealed though it be in writing already musty with the years. Miss Beecher's logic is still sound, and her statement in the preface of the Treatise rings true:

> The author of this work was led to attempt it by discovering, in her extensive travels, the deplorable sufferings of multitudes of young wives and mothers from the combined influence of poor health, poor domestics, and a defective domestic education.
>
> The measure which, more than any other, would tend to remedy this evil would be to place domestic economy on an equality with the other sciences in female schools. This should be done because it can be properly and systematically taught (not practically, but as a science), as much so as political economy or moral science, or any other branch of study; because it embraces knowledge which will be needed by young women at all times and in all places; because this science can never be properly taught until it is made a branch of learning; and because this method will secure a dignity and importance in the estimation of young girls which can never be accorded while they perceive their teachers and parents practically attaching more value to every other department of science than this. When young ladies are taught the construction of their own bodies, and all the causes in domestic life which tend to weaken the constitution; when they are taught rightly to appreciate and learn the most convenient

and economical modes of performing all family duties, and of employing time and money; and when they perceive the true estimate accorded to these things by teachers and friends, the grand cause of this evil will be removed. Women will be trained to secure, as of first importance, a strong and healthy constitution, and all those rules of thrift and economy that will make domestic duty easy and pleasant.

In 1852 Miss Beecher founded the American Women's Education Association to secure the establishment of higher schools for women in the West; and such schools were established through the association at Milwaukee, at Dubuque, and elsewhere. In accordance with Miss Beecher's plans these institutions were to have departments for the three essential divisions of women's training—normal training, physical education, and domestic economy. Money was forthcoming for classical training, but not for Miss Beecher's idol, the domestic economy departments; yet her plans for these projected collegiate schools of domestic economy were strikingly prophetic of present institutions and doubtless helped to open the way for the collegiate instruction which began in the West in the seventies.

The scientific interest in the household.—Meantime, parallel to this domestic-economy movement, there had appeared evidence of a scientific interest in household problems. Benjamin Thompson, 1753–1814, an American born at North Woburn, Mass., but living his adult life in Europe as Count Rumford, one of the world's great physicists, especially in problems of heat, devoted much time to scientific studies of domestic problems: The economy of fuels, of kitchen ranges, fireplaces and heating apparatus, of utensils, of various culinary processes, as baking and making soup and coffee. Matters of domestic lighting and ventilation also had the attention of this remarkable man, as did matters of social economy, such as mendicancy, military organization, and agriculture. There can be no doubt that Rumford's example as a scientist who thought the household worthy of serious study has been fruitful. This is certainly true as regards two American scientists, Edward L. Youmans (1821–1887), author of "Household Science," published in 1858, and Ellen H. Richards (1842–1911), "founder of the home-economics movement" as we know it to-day in American education. Youmans, who was a chemist and afterward founder of the Popular Science Monthly, brought together the contributions of chemistry, physics, and biology which bear upon the household, and out of them created a new subject, "household science," just as Liebeg a few years before in Germany had by a similar creation struck out the new discipline of agricultural chemistry. Youmans's work harks back to Rumford; his book is a distinct contribution, however, in presenting in systematic order the scientific explanations of matters of household concern, heat, light, food, air, etc., and it was used for a generation as a textbook in the school work which began soon after its appearance.

The Rumford respect for household matters as worthy the best attention of the scientist appeared again in Ellen Richards, a New England woman, who graduated at Vassar in 1870, entered the Massachusetts Institute of Technology by special permission in 1871 as its first woman student, equipped herself in chemical science until she became a famous sanitary chemist, and served the institute until her death as instructor in this field. During the last 30 years of her life Mrs. Richards interested herself in the applications of science to household problems of food, clothing, and shelter and became leader of the movement for education in this field. Author herself of many books, such as The Chemistry of Cooking and Cleaning, Food Materials and their Adulteration, The Cost of Living, The Cost of Food, The Cost of Shelter, The Cost of Cleanness, The Art of Right Living, Euthenics, and others; founder with Mr. and Mrs. Melvil Dewey of the Lake Placid Conference on Home Economics, and its chairman from 1899 to 1908; first president of the American Home Economics Association, 1909–1911; leader in social experiments related to the household, such as the New England Kitchen of Boston, 1890, the Rumford Kitchen (a plan for popular dietary teaching at the Chicago Exposition), the service of lunches to high-school students, 1894 (a century-old experiment of Rumford's in Europe), and the "Household Aid Co.," an experiment in furnishing trained household service on call by the hour, 1903–1905; university lecturer and popular speaker on household topics, consultant on institution management, and adviser in health, sanitary, and educational problems—this remarkable woman gave us, as much as any single individual ever gave a social result, our present national conviction of the necessity of education for the home. And perhaps the most remarkable thing about this achievement is that it was the social by-product of a laboratory career in sanitary science.

There are others who have contributed to the scientific study of the household. The problems of human nutrition have become a central matter of investigation and study in household science; and mention should be made here of early American students of nutrition: John R. Young, of Maryland, who wrote a thesis at the University of Pennsylvania in 1803 on "An Experimental Enquiry into the Principles of Nutrition and the Digestion Process"; W. Tully, who presented a paper on "The Nature and Uses of Aliment in the Animal Economy" before the Medical Society of Connecticut at New Haven, in 1810; William Stith, of Virginia, who wrote a thesis on digestion in 1821 at Pennsylvania; Prof. Nathan R. Smith, M. D., of the University of Vermont, author in 1825 of "A Physiologic Essay on Digestion"; Caleb Ticknor, 1805–1840, a graduate at Pennsylvania in 1829, who submitted a thesis on "The Influence of Diet, Dress, and Amusement on Health"; William Beaumont, 1785–1853, the American surgeon who studied digestion experimentally for many years in the case of Alexis St. Martin, "the man with a lid to his stomach"; John Stanton Gould, 1811–1874, professor of agriculture at Cornell and a student of institution dietetics; Edward Atkinson and especially the late Wilbur O. Atwater, 1844–1907, professor of chemistry at Wesleyan University, a recognized authority in nutrition. Prof. Atwater, as director of the Office of Experiment Stations in the United States Department of Agriculture, had oversight of the scientific work supported by Federal grants in the State experiment stations, and to him we owe not only the establishment of "nutrition investigations" in the Department of Agriculture and the popular bulletins on nutrition issued by the Department of Agriculture, but also effective encouragement of scientific work and instruction in nutrition in the colleges and universities.

As a student of household and institution food problems, an inventor of exact methods of investigation, especially the respiration calorimeter, a teacher of scientific workers as well as himself a scientist, Prof. Atwater is to be remembered as the creator largely of the present exact science of nutrition as far as America's contribution is concerned.

In fields other than nutrition, studies of housing, of management, especially Miss Salmon's "Domestic Service," of costs of living, beginning with Carrol D. Wright's work in Massachusetts in the seventies, of textiles in relation to the user—all these and many other studies now multiplying are making a foundation of science for education for the home.

In securing the common acceptance of household science as a subject of instruction, several influences may be mentioned in addition to the early domestic economy propaganda and this scientific movement:

(1) The demand of home women for a better household technique, as evidenced by the development of proprietary cooking schools in the seventies and manifested to-day in various schools and social organizations.

(2) The desire of young women for higher education, which resulted first in opening coeducational State universities and colleges, then in the establishment of independent women's colleges, thus furnishing a system of higher education in which special training for the home has come to be included.

(3) The demand of the school men for a practical education, in terms of life activities, in part realized from 1880 on by the manual training movement, and now more fully achieved in the program of "vocational education" in which the household as a vocational field has an important place.

(4) The nature of social progress itself compels the provision of an education for the home. There are pressing conditions, some economic and of pecuniary welfare, others vitally human and

personal, which require us to look to our housekeeping and homemaking if humanity is to secure the fullest possibilities from the home as a social institution.

The home woman's demand.—The adult home woman who has not received training in household science knows her needs and she has been increasingly aware of them in the last two generations. One of the first manifestations of this desire for organized household knowledge was the development in the seventies of practical cooking schools for "ladies," in the eastern cities. The New York Cooking School was started in 1876 by Miss Juliet Corson, whose cooking classes had begun in 1874. Miss Corson had an attendance of 200 the first year, and the school soon included not only a ladies' class, but a plain cooks' class, children's class, normal class, etc. The New York Cooking School is still performing a creditable and useful service.[1]

In 1876, Miss Johanna Sweeney started a cooking school in Boston; in 1876 Miss Maria Parloa gave her first cooking lectures in New London, Conn., and the next year opened her cooking school in Boston; in 1879 she established the summer school of cookery at the Chautauqua Assembly, Chautauqua, N. Y.; and the same year Miss Parloa lectured in the Boston Cooking School, then established by the Women's Educational Association, of Boston, and incorporated four years later. This school was continued until 1902, when it was merged with Simmons College; Mrs. D. A. Lincoln was made principal in 1879, and later principals were Miss Ida Maynard, Mrs. C. M. Dearborn, Miss Fannie M. Farmer, and Miss M. W. Howard.

A school of cooking was opened in Philadelphia by the New Century Club, with one of Miss Parloa's pupils, Miss Devereux, as teacher, in 1878; Mrs. Rorer followed her a year later for a couple of years, and then opened her own school, The Philadelphia Cooking School, which continued for 25 years. Another early worker was Mrs. Helen Campbell, who established a school at Raleigh, N. C., in 1877; and at Washington, D. C., in 1880.

In addition to these fixed schools, lectures and demonstrations were given before women's clubs and similar organizations by the principals of these schools and other lecturers, in many cities and towns. Primarily this meant an opportunity for training for adult home women, although children and domestics also often received instruction; public opinion was also being educated to demand, a little later, household education in the schools.

To-day the needs of the home woman for more adequate household knowledge are met by home economics work in women's clubs; extension work of the State colleges, and urban extension teaching of settlements, etc.; continuation education at public expense; the great popular literature and periodical publications devoted to home problems, and many other agencies.[1]

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[1] The work of this school is described more fully in Part II of this report (Bulletin, 1914, No. 37).

Woman's higher education and the home.—The higher education of women which has been secured in the last 60 years now includes in its program education for the home. Mary Astell's plea for a college for women in England in 1697 began to be answered in America in the first half of the nineteenth century. Oberlin College opened its doors in 1837 to four women college students; in the same year Mary Lyon's fight for an incorporated, endowed higher institution for women established Mount Holyoke Seminary, though it was not to attain full college rating until 1888. Beginning in 1850 with Utah University, and following with Iowa in 1856, Washington in 1862, Kansas in 1866, Minnesota in 1868, and Nebraska in 1871, it became usual to establish the State universities for men and women students alike, and other State universities already founded opened their doors to women—Indiana in 1868; Michigan, Illinois, California, and Missouri in 1870; Ohio in 1873; and Wisconsin in 1874. About the middle of the nineteenth century several independent colleges for women were opened: Wesleyan Female College, Georgia, in 1839; Greensboro Female College, North Carolina, 1846; Elmira College, New York, 1855. Elmira's opening was in the decade in which Catherine Beecher was working for the establishment of practical arts colleges for women, to have departments of normal training, physical training, and domestic economy. Ten years later Matthew Vassar established a college for women, with adequate endowment, and in his letter of directions included domestic economy in the program of studies, though no place was given it by the faculty; Smith and Wellesley Colleges (1875) and Bryn Mawr College (1880) followed, as academic colleges with no provision for applied science. The women's colleges coordinated with universities, Radcliffe (1879), Barnard (1889), and the women's colleges of Brown University, Western Reserve University, and Tulane University, repeated the academic model; Brown University, however, has had extension lectures on household science, and Newcomb College of Tulane University and the college for women of Western Reserve University now have growing departments of home economics.

The State colleges and universities gave the first welcome to this practical teaching. The young women were pressing into these institutions and seeking opportunities both for higher general education and for specialized vocational preparation. The State College of Iowa gave lectures on housekeeping in 1872; the State College of Kansas gave its first instruction in sewing in 1873, and a course on foods by the professor of chemistry, beginning in 1875; and the State University of Illinois, then the "Industrial University," in 1874 began

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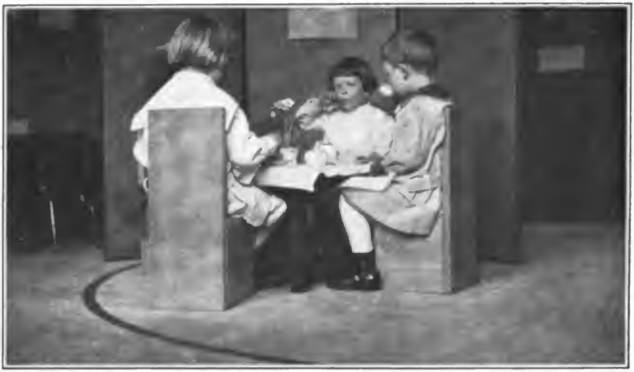
[1] For a detailed statement of the work of these agencies, see Part II of this report (Bulletin, 1914, No. 37).

A. GIRLS' CANNING CLUB WORK. EXTENSION TEACHING, STATE NORMAL SCHOOL AT HARRISONBURG, VA.

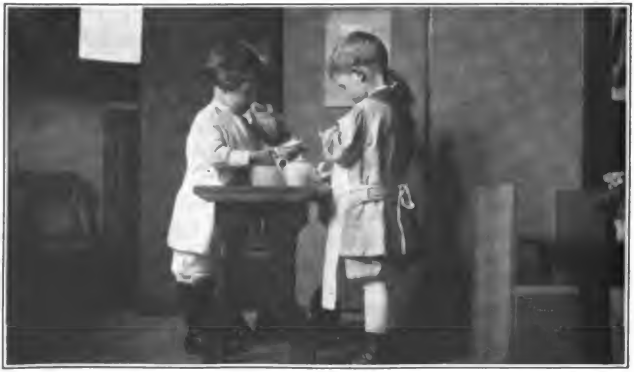
B. WARM LUNCH SERVED IN AN IOWA DISTRICT SCHOOL.

(Courtesy of Iowa State College.)



A. HOUSEHOLD ARTS IN THE KINDERGARTEN.

Mid-morning lunch of cocoa and crackers. The cocoa was made by the children. Table and chairs were constructed by the children.



B. HOUSEHOLD ARTS IN THE KINDERGARTEN.

Washing dishes after school lunch. Work aprons also made by the children.

instruction which a year later developed into a well-planned four-year curriculum leading to the degree of bachelor of science in the school of domestic science, and this school was continued at Illinios for a number of years. In 1877, instruction was begun in Laselle Seminary, Auburndale, Mass.

In 1890 there were departments in 4 State colleges—Kansas, Iowa, Oregon, and South Dakota; 9 more had been added by 1895; by 1900, there were 30; and to-day practically all the State colleges and universities have departments of home economics.[1] One can not ascribe too much credit to the land-grant colleges and universities for their contribution to the development of education for the home. It is especially this group of colleges, among higher institutions open to women, that welcomed and developed the subject of home economics.

The academic colleges for women long hesitated before yielding to the demand for applied science instruction, but with the exception of a few conservative institutions the subject of household science has now found a place. And in the excepted institutions applied science courses show a tendency in this direction. If the movement for higher education of women is not indeed to prove sterile, it can not stop with providing academic instruction, but must include specialized professional education for women's unique fields of service comparable to the schools of engineering that have been developed for men. It is such technical education of women on the collegiate level, indeed, that was created by John Simmons in establishing Simmons College, Boston (1902); that has been further provided by the school of practical arts of Columbia University in 1911; the recently established graduate school of education at Bryn Mawr; the vocational departments of Elmira College (Elmira, N. Y.), Rockford College (Rockford, Ill.), Milwaukee-Downer College, Mills College (California), Newcomb College of Tulane University, and Women's College of Western Reserve University, to mention only a few items of progress in this field. The example of Wellesley College in establishing in 1890–91 a course in house sanitation and the present offering by Vassar, Smith, Wellesley, Mount Holyoke, and other women's colleges of courses covering such household matters as the chemistry of foods, sanitary chemistry, and the economics of consumption show that the idea of some professional training as a supplement to an academic college course is finding increasing favor. As rapidly as such professional training is provided for women college students, direct preparation for home responsibilities will doubtless be given a place in the program.

The schools—Manual training and vocational education.—Household arts was introduced into the public schools in connection with the manual training movement beginning in the eighties, and has received additional impetus in the vocational education propaganda of the last decade. Interest in the household arts as school subjects antedated the manual training movement, however. Boston school girls as early as 1798 are said to have spent school time on sewing under their regular teachers; on petition, the school committee gave permission for needlework, in 1821 in the primary school, and in 1835 in the second and third classes of the writing school; in 1854 a petition that sewing be introduced into all grammar schools was received, the interest of the petitioners very evidently being the social or philanthropic desire that children in needy families be taught to sew. In 1870 the Massachusetts Legislature made drawing obligatory in public schools; in 1876 it authorized local school committees to teach sewing, and the Boston committee soon introduced the subject. The philanthropic interest in the teaching of sewing and cooking meantime was extending over the country, especially through the kitchen-garden movement,[1] and sewing and cooking classes were started by private initiative in New York, Philadelphia, Boston, Cleveland, Cincinnati, and Chicago, beginning about 1876. These voluntary classes, started primarily to improve social conditions, were in many cities finally taken over by the educational authorities in connection with the manual training work, as when the cooking classes for school children in Boston, started by the Young Women's Christian Association in 1880, and others opened by Mrs. Shaw and by Mrs. Hemenway in 1885, became the basis of regular school work in 1887. Dr. Jessup, in his study of "Special Supervision in the Public Schools," has traced the transfer of standards in these voluntary classes as they came under the manual training influence in the schools, showing how the original social and humanitarian point of view gave place to an intellectual and educational purpose; the subject was pedagogized, yet the practical ends in cooking and sewing had been so stressed "that the refraction in these subjects was less than in the case of manual training."

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[1] See Part III of this report, Bulletin, 1914, No. 38.

The transformation of the "Kitchen Garden Association" of New York into the Industrial Education Association in 1884, which became a propaganda agency of the manual training movement, was a recognition of the fact that household arts was an integral part of the wider manual training movement. This movement meant a new method for all school subjects quite as much as new subject matter itself in the schoolroom. Prominent in the purposes of the association was this:

> To train women and girls in domestic economy and to promote the training of both sexes in such industries as shall enable them to become self-supporting; to study the methods and systems of industrial training and secure their introduction into schools.

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[1] See p. 31.

It was this Industrial Education Association which in 1888 established the New York College for Training Teachers, now Teachers College, Columbia University. Teachers College, together with Pratt Institute, Brooklyn, established in 1887, Drexel Institute, Philadelphia, in 1891, and the Kansas State Agricultural College, the courses of which go back to the seventies, are to be mentioned here as the chief early sources for trained teachers of household arts for public school work. The training of household arts teachers in normal schools began with the normal class at the Boston Cooking School, taught by Miss Maria Parloa, in 1880–81, and in successive years by Mrs. Lincoln, Mrs. Dearborn, and Miss Farmer, and with the private normal school of household arts, established by Mrs. Hemenway in Boston in 1888, and later transferred to the Framingham (Mass.) State Normal School; and normal training went forward, at the South especially, in the next decade, while in the last 10 years the training of teachers in normal schools and colleges alike has progressed rapidly.

Some of the other early dates of introduction of household arts into schools may be noted: Manual training for boys and girls in Montclair, N. J., 1880; sewing in Peru, Ill., 1881; sewing in Springfield, Mass., 1883; high school domestic science first taught in Toledo, Ohio, 1884; domestic economy in San Francisco High School, 1885; cooking introduced into the city normal school, Philadelphia, 1887; sewing and cooking in public schools, Washington, D. C., 1887; manual training in primary schools of Boston, 1890.

As household arts was introduced into the schools through the manual-training movement beginning in the eighties, so its recent great development has come in connection with the industrial education movement. The Massachusetts industrial education law of 1906 began this movement, and the special legislation of this and other States is presented in Part II of this report.[1] It is sufficient here to call attention to the fact that the household is given full recognition, together with agriculture, industrial, and commercial vocations as a field for which the schools are to give preparation. With the training of young women for pursuits outside the home, this may mean the learning of a double vocation—homemaking and a second vocation to be followed in the period between school and marriage, and perhaps later.

Social progress and education for the home.—The nature of social life itself calls for an education related to the home. This is true on general grounds, and there are many specific considerations to reinforce the argument. In no field to which training can be applied are we willing to-day to trust to learning by chance or by imitation; the home as a conservative institution has been slow to receive educational attention, but its vital interests make education for the home second to none in importance.

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[1] See Bulletin, 1914, No. 37.

To the child the home furnishes the intellectual and moral life with the fundamental attitudes that control in all other relations. It is here, if anywhere, that the average adult finds the personal satisfaction and development which is the central experience of living. For all its members the home is the center of life's satisfactions, and in it we live. This personal life of the home can be strengthened and enriched by well-considered plans and by better home ideals. Strength and satisfaction in the home relationships form a prime problem. The breaking down of the family bond is to be overcome by strengthening that bond, by enriching the home experience of the individual, child and adult alike. This is the only cure for the divorce evil. Our education for the home will be a sorry thing indeed if it concerns simply the household arts of cooking, sewing, and house care, unless indeed it teaches us the arts of "family building," of home making, of living in families in such ways as to bring increasing personal satisfaction as the years go by. It is just this strengthening of the personal life that education for the home is ultimately to furnish.

As related to individual and social prosperity, also, the home is vitally concerned. We have come nationally to a time of economic pressure. Our free lands are gone, the exploiting of wealth from the soil is over; and national conservation, efficiency in production, and thrift in the household are the new watchwords. Progress for the average family group will turn now on the wise household use of resources more than upon increase of wealth. Truly we need still to increase efficiency in producing wealth, but intelligent consumption of wealth especially merits attention. This means the education of "the woman who spends," and emphasis upon domestic economy as well as upon industrial economy. It means training a nation's homemakers to the economic possibilities of their vocation.

We need to *teach* home making, too, if we would reach the child. The child has become school minded; all other knowledge reaches him through the school, and the school can therefore increase the child's interest in and respect for his home.

Briefly the school can do these things for the home: (1) Reinforce the natural interest of the child in the home and strengthen that home mindedness of the best type which centers the individual securely in the small kin group as the only enduring basis for his wider social relations; (2) impart knowledge necessary for leading or sharing in the activities of the household as regards shelter, food, clothing, management, child life, thrift, and other household matters of importance; and (3) afford some practice in these activities where such practice is necessary for learning, both by laboratory practice within the school and cooperation with the home.

We must use the school route then as regards home betterment quite as we do for progress in any other field, because the child and the adult, too, are school minded.

The nature of housekeeping and home making has changed so that there is subject matter to be taught. It is no longer a rule of thumb to be learned by imitation. Under the old housekeeping, infant mortality, sickness, lessened efficiency, ill-considered expenditure, inartistic and unhygienic surroundings and conditions that make housework difficult might abound for lack of knowledge of a better way. As rational ways of conducting the household have become established, these must be made current by education. We are not content that city dwellers get tuberculosis when habits of sleeping with open windows can be taught, or that farm women continue to carry water from the spring when piped water "can be *taught into* their houses"; or that both send forth to work men inefficient because of poorly prepared food. The better knowledge now exists, and the spirit of our day demands that this knowledge be brought to every home by education.

The popular demand that our schools give training for the home is based, therefore, first on the significance of the home in the life of every individual, adult and child alike. If the school can increase the meaning of home to each of us, this is a kind of personal wealth which every individual wants. Next, on the value to society of the moral purpose, altruism, and cooperative spirit that arise from wholesome home life—these are the ethical qualities which communities will need more as modern life grows more complex, and there is no other source for their development but the school of unselfish family relationships. An education for the home can not create these qualities, but it can emphasize them and can do something to refine, increase, and make them sure.

Further, education for the home by insuring skill in the household use of wealth is to be socially supported because it will increase economic welfare. It will promote thrift, protect health, and thus add to the workers' efficiency; it will professionalize the wealth-conserving vocation of housekeeping, just as vocational training in commerce, industry, and agriculture will increase the production of wealth.

The application of science to everyday affairs has created a new home making, the facts of which are now assembled ready for teaching; the educational attitude of child and adult alike makes teaching the easy and natural process in this field, as in all others. The social demand is as unmistakable as it is justified that this knowledge must be applied to the home here and now by means of the school. Our communities, States, and the whole country are welcoming educational effort for the benefit of this oldest, most personal, most significant of human institutions, the family and the home.

Section 2. THE SUBJECT MATTER OF HOME ECONOMICS.[1]

An authoritative definition and outline of the subject matter of home economics has been given by the American Home Economics Association in the "Syllabus of Home Economics" (1913).[2] The definition is as follows: "Home economics as a distinctive subject of instruction is the study of the economic, sanitary, and æsthetic aspects of food, clothing, and shelter as connected with their selection, preparation, and use by the family in the home or by other groups of people."

It is to be noted in the definition that home economics embraces the three subjects—food, clothing, and shelter; that for each their practical relations of selection, preparation, and use are emphasized; and finally that the subject is an applied science in that its facts are comprised in the economic, sanitary, and æsthetic aspects of its three divisions—food, clothing, and shelter.

The syllabus outlines the subject matter under four main divisions: I. Food; II. Clothing; III. Shelter; and IV. Household and institution management. The first three subjects, food, clothing, and shelter, are each subdivided into (1) selection, (2) preparation, and (3) use; and the fourth, management, into (1) material basis, (2) social contacts, (3) activities and functions, and (4) aims and results.

The following subdivisions of the syllabus dealing with foods will illustrate its general scope: (1) Selection—theoretical considerations, classification, composition and properties, nutrition value, production and manufacture, adulteration, cost. (2) Preparation—cooking, preserving, serving, handling, and care. (3) Use—theoretical considerations, dietetics, catering, social relations, standards. Under each of these subheadings are grouped, in outline form, analyses of the subject matter.

The syllabus is intended to show in a general way the content of home economics as a distinct branch of knowledge—

> to classify in logical order the various topics which can properly be included under the term "home economics." It does not represent an outline for a course of instruction, but rather a classified list of topics from which courses can be made. * * * Home economics, like many other subjects of instruction—for example, sociology, engineering, or agriculture—is a complex. In it the contributing subjects are grouped around the ideas of food, clothing, and shelter. Among contributing groups are art, history, anthropology, sociology, æsthetics, economics, physiology, hygiene, mathematics,

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[1] The subject matter and content of instruction in home economics is concretely illustrated by outlines of typical college courses given in Part III of this report (Bulletin, 1914, No. 38).

[2] Syllabus of Home Economics, American Home Economics Association, Roland Park, Baltimore, Md. 1913. Paper, 50 cents; cloth, $1.

chemistry, physics, and biology. * * * As is the case with many other subjects, courses of instruction in home economics may be cultural, technical, or vocational, and the grade of instruction primary, secondary, or advanced. The instructor must select the proper material from the total range provided, the selection being determined by the particular requirements of the case.

Section 3. TERMINOLOGY IN EDUCATION FOR THE HOME.

The terminology applied to education for the home and its various divisions has been and still is confused. Home economics as the generic term has the widest sanction, aided, doubtless, through its adoption by the Lake Placid Conference on Home Economics and by its successor, the American Home Economics Association. The Lake Placid conference in 1904 adopted the following terms for use in designating educational work of various grades: Hand work for elementary schools; domestic science for secondary schools; economics for normal and professional schools; euthenics (better living) for colleges and universities. While the term home economics has had wide use as a generic term—for example, in college departments, in Federal legislation adopted and proposed, in Government use—these other recommendations have not been accepted. One distinction, long observed but now rapidly disappearing, is the use of the term "domestic science" to indicate cookery and sanitation and "domestic art" to indicate textiles, sewing, dressmaking, millinery, and decoration. The distinction is not well drawn, for there is science in the "domestic art" field and art in the "domestic science" field.

The term "household arts" seems to be growing in use, especially for work in public schools, and even in some college departments where it occasionally replaces the term "home economics." The public school use of the "household arts" term seems assured; it is incorporated in several of the industrial education laws, which will largely control this teaching in the future. The National Society for the Promotion of Industrial Education now recommends the use of household arts as a term for the training of the housewife, and the supplementary training of girls and wage-earning young women in household matters; the projected training of wage-earning domestic employees, cooks, etc., is by this society included under industrial education.[1]

An examination made of State laws showed that terms are used as follows: In laws regarding elementary education, domestic science is mentioned 12 times; domestic economy, once; household management, decoration, etc., once; and household economy, once. In laws regarding secondary education, domestic science is the term used 18 times; domestic economy, 7 times; household economics, 3 times;

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[1] See also "Vocational Education, Proposed Terminology," report of the committee on vocational education of the National Education Association, July, 1914.

household arts, once; homemaking, once; domestic arts and sciences, once. In laws regarding normal schools the term "domestic science" is used once and "household economics" once. In the industrial education laws, "household arts" appears three times; domestic science, once; household science, once; and home making, once. By this count domestic science is preferred everywhere except in industrial education, where household arts is preferred. An examination of terminology in use in local schools would be a better test of usage than this legislation, however.

The new emphasis upon vocational training makes necessary a comprehensive term indicating the profession of household management as agriculture indicates farm management; "domi-culture" was once proposed, though perhaps not seriously. "Home making" and "housekeeping," especially the former, have come into use to indicate the complete field of home responsibility—the two terms have a different connotation, and both fields indicated are to be included in the education for the home. It is just this emphasis upon the entire direction of the household as an aim in vocational education that is one of the needs in the new vocational training; a corresponding accurate professional term is therefore important.

The qualifying words "home," "domestic," "house," "household," have all been used with various general terms as "science," "art," "economy," "economics," "arts," "technology," "engineering," "management," etc. Of the qualifying words the choice seems to lie between "home" and "household." "Home" emphasizes the social and personal elements more and lays less stress on the mechanical, technical, and administrative side. "Household" seems a more appropriate scientific term than "home." "Home making" and "household management" indicate at bottom the vocational distinction between the services, position, responsibilities of the unpaid housewife or other member of the family and those of the employed manager of a household. Doubtless there is great need of accurate vocational terms, and "homemaker" and "household manager" are two such terms. As to the general terms used—science, art, economy, economics, art, technology, engineering, management, and administration—some are academic names for knowledge to be imparted and some emphasize knowledge in use in a profession. The traditions of the schools favor academic words like "science." The demand for vocational training properly asks for generic words that mean the vocation or profession, not the study, and professional terms will be used ultimately in higher technical schools.

The practical suggestions are these: To use the common general term home economics for the whole field of instruction, at least until a better one is found; discard the ambiguous terms domestic science and domestic art; use household arts in elementary schools and possibly in secondary schools—though in the latter a more vocational term, home-making or household management, is more accurate; in academic high schools the term household science may temporarily be useful until the vocation of the girl who does not go to college is adequately recognized; in academic colleges home economics is probably the most useful term, although at present collegiate instruction in this field is often given in special courses, such as the economics of consumption, the economic position of women, the home as a social institution, food chemistry, sanitary chemistry; and in colleges the possibility of "euthenics" as a term is to be taken into account; in technical colleges and professional schools, the professional terms household management or administration, homemaking, household arts, technology, or engineering will be increasingly used as indicating the field of service, while terms like foods, shelter or housing, clothing, management, service, marketing, accounts, child care, house care, laundering, domestic relations, will ultimately indicate divisions of instruction, terms taken from the concrete situation in the household itself.[1]

The term "home economics," it is to be noted, is getting into popular currency, too, especially in connection with extension teaching and in connection with Federal legislation, although here it will have to contend with a term in wide current use, "domestic science," and with the term "household arts," which is gaining currency in public school and industrial school work. As to Ellen Richards's term "euthenics," it is difficult to predict—scientific people are using it increasingly, it seems, and a few college courses have adopted it. The "eugenics" movement, better living by controlled heredity, is making the way easier for its correlative, "euthenics," the science of better living by controlled environment.

Section 4. THE AIMS IN EDUCATION FOR THE HOME.[2]

The recent State laws providing for industrial, agricultural, and commercial education have uniformly included household arts training as an integral part of the program. Under these laws much of the household arts teaching in the public schools will now be developed. It is an important question just how exclusively this vocational aim should have recognition. Probably in the first six grades it should not appear at all, and ultimately, as the years of actual schooling are increased, it should not appear in the whole elementary school. Fundamentally the purpose of the elementary school is to emphasize subject matter and not technique. In the secondary and higher schools, however, the primary aim must be vocational; that is, the acquirement of knowledge and technique which will yield efficiency in practice. Just how this efficiency is to be secured we may not yet know. It will not come by exclusive attention to skill nor by exclusive attention to knowledge. That much is certain. It may be known by its fruits—power in the actual situation. There can be no doubt that emphasis on the vocational aim is the one thing needed in the secondary and higher institutions. It has been thus expressed by Dean James E. Russell, of Teachers College, Columbia University:

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[1] The development of agricultural curricula presents an analogous situation. These are now organized around the units of farm activity, not about academic departments of chemistry, physics, bacteriology, etc.

[2] For a further statement of aims in the elementary schools, based on the statistical returns, see Part II of this report, Bulletin, 1914, No. 37.

> Under domestic science and domestic art we have been teaching *subjects*, in the sense that chemistry and algebra are subjects; we are now to teach a vocation—the trades of the household and the professions of the domestic engineer and homemaker.

The vocational point of view is emphasized by the department of public instruction of Pennsylvania in a recent circular on Household Arts under the new vocational education law, which makes a distinction between domestic science and household arts, meaning by the latter vocational preparation for housework, either in one's own home or in outside domestic employment. In interpreting the vocational education law the State department will not give grants for ordinary domestic science and domestic art courses:

> Manual training, classroom sewing, and laboratory cooking have in the past lacked the vocational purpose and methods adopted in vocational training. Classroom sewing and laboratory cooking frequently have no definite relation with the requirements of the average home. The sewing does not always enable the girl to make her own garments. Little or no attention is given to the item of cost, the selection of material, the remaking of a dress, or the repairing of clothing. Laboratory cooking is too often confined to the preparation of salads and dainties, rather than the preparation of the substantial food required by the average family. Too little attention is given to foodstuffs offered by the local markets and to the economic condition of the group served.
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> "Household arts education," on the other hand, has for its controlling purpose the preparation of the girl for efficient and profitable service either as a manager of a household, or servant, or waitress, or cook, whether this service be rendered in her own home or in that of another as an employee.

This emphasis on vocational preparation means that the problem is the teaching of homemaking (i. e., responsible direction of the personal life of the family group, a joint responsibility of men and women, chiefly administered by women), child-care, housekeeping, control of the family or individual income, cooking, sewing, laundering, and other special household arts.

But academic or cultural study—the mother tongue and its literature, the historical and present social situation, the scientific method—should accompany technical and vocational training, so that the two will fuse. Life itself is vocation plus avocation, and education can safely follow this pattern. Pure academic training is a dish of sweets with no gripping experiences; exclusively technical training deadens and narrows. Your classicist may easily be a prig, your technician a boor—neither is an acceptable human type. Education to make human beings must recognize two facts—the day's work and the social life of the mind.

Education for the home must aim to reach every girl. This suggests that household arts should be a required subject in the elementary school; and that the subject must be placed low enough in the grades to reach the majority of girls before they leave school (fifth and sixth grades at present), or an efficient system of continuation schools must be provided to help when these young women later marry. The Indiana commission on industrial education urged that no young girl under 16 be allowed to leave the schools who had not had instruction in household arts. A minimum of such instruction should be required in high schools.

It has been urged that the elementary school is the time to acquire hand skill. It is rather the time when, if any hand skill is taught, it shall be without effort at fine muscular adjustments. The stenographer, the draftsman, the surgeon, the artist—all learn fine muscular skill in adult life; the same is possible in household arts.

Education for the home must equip for home-making as well as for housekeeping; the personal relationships of the home, as distinguished from the work of the home, may be helpfully considered at any age, and by boys as well as by girls, in the elementary school. Ethical attitudes toward home and family may be absorbed from a teacher's attitude; and in high school and higher institutions a rational basis for the home idea may be developed.

Does education for the home aim at culture? A study of Greek costume or of Roman family life is cultural; why not a study of American clothing and of the modern home and family? While the concrete stuff studied is much the same, there is evidently a fundamental difference in point of view. The classical study is illuminating, broadening; so is the modern. But the former is avocational, and the latter vocational and professional. There are cultural by-products of any vocational study, as medicine or law, and they are comprised in part in the historical, social, and economic relations of medicine and law, the fringe of interesting knowledge that surrounds the center of facts that are vocationally useful. Education for the home is primarily professional and vocational, as are engineering, medicine, and law; it is domestic engineering. It has its cultural aspects, however, and in certain academic colleges these avocational aspects of the home—for example, the history of the family and the economic and social aspects of the household—may perfectly well find a place, when household technology would be excluded by the controlling educational ideal of the institution.

In large cities the household-arts course of study in matters of food and clothing must be adjusted to varying racial and economic standards. Among immigrants national food ideas and national costume must be taken into account, and instruction adjusted to various scales of living must be presented; and where actual adjustment of subject matter to different standards is not required, the teacher ought, by respect and sympathy for these differences, to maintain the child's respect for his parents' ways, and give no occasion in her teaching for weakening the family bond in the homes.

Section 5. METHODS OF TEACHING IN HOUSEHOLD ARTS.

Good teaching in household-arts, like that in any other field, involves the development of special faculties; that is, the acquiring of mental and manual power in particular fields. Some points are here suggested that may help in schoolroom practice. While the suggestions are especially designed for public-school work, some are applicable to higher institutions.

Instruction in theory and practice should go hand in hand; practice without guiding principles becomes mechanical and is undesirable, even though it may lead to skill; theory without practice is profitless.

In elementary schools the danger is relatively too much practice, too few ideas; in higher schools, if not too many ideas, often too little practice.

Habit training, cleanness, order, etc., are important, especially the habit of using the mind to solve problems and control conduct.

In food laboratory work there are two tendencies in higher institutions: (*a*) To adopt in the food laboratory the methods of the chemistry laboratory, to deal with small quantities in various tests and experiments, to examine processes critically; (*b*) to give practice in the preparation and service of food. Both are valid; the former represents the collegiate tendencies in teaching, the latter the technological and professional. Both methods are applicable in high schools.

In vocational instruction the child should undertake real projects; in cooking, food which could be served in a meal; in sewing, a garment to be worn; in housewifery, a room to clean—hence the usefulness of the practice house or apartment; in laundering, to wash the laboratory towels and garments brought from home; in household accounts, a record of one's personal expenses, etc. This emphasis upon a useful product is now noticeable in sewing, where at one time "sample books" were a common method.

Good teaching in a vocational subject throws upon the pupils the responsibility for the plan of procedure, for problem solving in as large dimensions as they are capable of. The general school authorities determine the course of study; the teacher determines the sequence of topics; the pupils should as far as possible explore and blaze their way through individual problems. This is the method of human experience everywhere. Hence, good teaching means problem setting and discussions of processes and materials for its solution. There may be class discussions of problems, and the individual pupil may then undertake to draw up a way of procedure for her individual problem.

Individual laboratory practice in cookery in which each child receives the entire practice is to be recommended as the standard method in elementary and higher schools. Where conditions do not permit that—

> group work may be organized in which two to four children in each class do the cooking while the other members of the class watch the operation, offer suggestions or criticism, ask or answer questions; and another group of four clean the dishes, while the remainder write the directions for making the dish which was prepared before them.

In classes for atypical and retarded children it has been found desirable to work with small groups of four to six pupils.

Excellent textbooks are now available, for high-school work at least, and obviously they will strengthen the organization of subject matter; they must not be allowed, however, to obscure the primary vocational aim of the teaching.

The use of the student's notebook in such form that it will serve as a record for later reference in housekeeping is important. Printed recipes and directions should be used to save time in copying. Many schools and institutions furnish typewritten notes; they might be furnished commercially in printed form. Loose-leaf recipes have been published by certain schools.

There is much available illustrative material for instruction in foods, textiles, and shelter. The idea of a school museum is applicable in this field. Magazine illustrations, advertisements, and dealers' catalogues, with prices, are useful. The practice house with selected kitchen, laundry, and other equipment is the best form of illustrative material.

Explanation can be facilitated by means of charts, blackboard sketching, drawing, demonstrations, or exhibition of models.

The reference library in schoolroom or laboratory, with dictionary, reference books, parallel textbooks, pamphlet material, including Government and other bulletins, should be a working factor in constant use in household arts instruction.

Home and school should cooperate. The school should teach in terms of home problems, as meals for the family and furnishings for definite rooms of the house; the school should use the housework of the home as a practice field; the home should use the products of school work. The children can contribute recipes, food costs, and other data from home; the teacher can tactfully develop much cooperation.

Household arts should contribute to the social life of the school itself by school parties in which one grade entertains another—the girls the boys, the pupils the teachers, the children their parents. Excursions should be made to outside industries, especially to those that serve the home—laundries, bakeries, stores, etc.; and occasional addresses should be arranged before vocational classes by housekeepers, physicians, nurses, dietitians, decorators, plumbers, grocers, merchants, farmers, and others whose work directly concerns the home.

In instruction regarding the household one may well emphasize economy. It is possible to show that common inexpensive foods are nutritious and may be made attractive, or that a beautiful garment may be made from inexpensive materials. It is important to consider money values throughout—the English schools teach cookery in terms of three weekly family budgets: $7, $9.50, and $12.50. American figures should be higher, but teaching in terms of the $12, $15, and $20 wage-earning families is one of the most important points of approach in public-school work. Economy of time and strength, as well as of money, should have attention.

Special motives may be found in public exhibitions of the results of students' work. The value of such exhibits as a method of community teaching might be utilized with older students.

The sale of school products, food, clothing, etc., has important relations to motive and professional effort. The tomato canning clubs which sell their products, and the school lunches supplied with materials from cookery classes, are illustrations. Some foreign schools have sold cooked products to certain neighboring families which agree to take them regularly. Orders for dresses and hats have been handled satisfactorily by American technical schools.

Instruction in household and other arts should receive aid from other subjects in the elementary school, from geography, history, arithmetic, art, etc.; in higher schools, from related sciences; and in both cases it should contribute motive in such studies.

The teacher's own attitude toward the home as an institution is important; respect breeds respect, and the ethical results desired from this teaching will come not only from discussing the personal problems of the home, but from the manner in which they are handled.

Section 6. THE KINDERGARTEN AND THE HOME.

The influence of the kindergarten upon its child pupils, in its relation to home life, merits mention. Mother-play is fundamental in its method; the home is the source of much of its material and an important end-point in its teaching.

The kindergarten, in dealing with the youngest children, is bound to cooperate with parents and come close to home problems. More than other general school agencies, it tends to assume a responsibility for parental intelligence as to proper methods of home administration and child care, and this, naturally, because its little charges are making the first slight remove from entire dependence upon home environment. The institution which would first supplement the home must necessarily largely cooperate closely with the home, and may even seek to improve the home.

Prof. Patty S. Hill has gathered the following list of subjects presented before mothers' and parents' clubs in kindergartens. They suggest the broad service already rendered in kindergarten extension work. The list, given in detail, for subjects which concern the home, is as follows:[1]

I. The hygienic and curative effects of open air.

II. Problems of food: Proper care of milk in dairies and homes; proper use and care of drinking water; qualities and differences in requirement of good food for child and adult; selection, preparation, and care of food in the process of manufacture, in stores and in homes; proper mastication of food.

III. Problems of clothing: Artistic, hygienic (winter and summer); ethical, industrial; effects of ill-fitting clothes and shoes.

IV. Hygiene and nursing: Food for infants; food for the sick or invalid; care of the sick in homes and hospitals; care of contagious and infectious diseases; care of eyes, ears, teeth, etc.; hygienic habits; hygiene of bathing.

V. Hygiene and sanitation in homes: Building and fire laws; disposal of garbage in home and street; care of plumbing; protection from insects, flies, mosquitoes.

VI. Home economy: Wages in relation to expenditure and savings; renting and ownership of homes; savings banks (adults and children); allowances for wives and children; wise and unwise methods of increasing family income with mother and children in home; sweat-shop work with its dangers to producer and consumer; child labor laws and their effects; right and wrong use of day nurseries.

VII. Use and abuse of recreation and amusements.

VIII. Good or ill effects of literature, music, and art.

IX. Relation of rights and responsibilities in democratic government.

X. Right of children to religious training and moral instruction.

Section 7. THE KITCHEN GARDEN AND TEACHING OF HOUSEHOLD ARTS.

The kitchen garden is a school of household arts for small girls which employs toy models of household furnishings and equipment and provides a program of activities, games, and songs related to home making. Established in 1877 by the late Miss Emily Huntington, of New York, to whom the name was suggested by the example of the kindergarten, the kitchen garden soon had a wide vogue. Miss Huntington wrote in 1901:[1]

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[1] Taken from "The Relation of the Kindergarten to Child Welfare," by Patty S. Hill, in the "Proceedings of the Child Conference for Research and Welfare," 1910, pp. 38, 39.

> Kitchen garden is a system by which children are taught the many little duties which, when properly performed, go to make a home comfortable, except the cooking of food. The system is a combination of songs, exercises, and plays, designed in a thoroughly practical way to train a child in simple housework. It is divided into six distinct parts or occupations, each taking a month to master. They comprehend the following details of domestic work: Kindling fires, waiting on the door, bedmaking, sweeping and dusting, completely arranging a room with the manipulations of broom, whisk broom, dusters, etc.; also all laundry processes, from the preparation of the tubs to the polishing and folding; scrubbing; and laying a dinner table in the due order of courses. In connection with this a pricking lesson teaches in kindergarten style the parts of beef and mutton, and how to cook and cut each. Last of all comes the mud-pie play. Molding clay as a substitute for dough and pastry, the children knead bread, turn tiny rolls, cut out biscuits, and make pies. All the lessons are enlivened and emphasized with appropriate songs. Thus, with the simple device of toy appliances for real domestic apparatus, the children acquire the order, precision, and neatness essential to household service. The age of the children taught varies from 6 to 16.

The original kitchen garden taught household arts by means of miniature toys, a set for each girl in the group. A modification of the method uses large models of house furniture, and provides somewhat more of real work instead of play work and games, without going over entirely into the field of real work as in the usual elementary school lessons in household arts. Miss Mabel Louise Keech has outlined such a plan, using "one set of toys for the entire class large enough for the girls to handle easily and also small enough to be attractive and to appeal to those who so often find housework at home drudgery."[2]

Miss Keech outlines her two-year course for children from 8 to 11 years, in a class of 12, meeting for not over an hour and a quarter. A kindergarten room, if available, is recommended; a water supply and a stove for washing and ironing lessons is needed; uniforms of white caps and aprons are desirable. The equipment recommended, which can be purchased locally, costs $30.90 for the bedroom set (a 3-foot dresser, 2½-foot bed, etc.); $12.05 for kitchen (stove, 15 inches, etc.); $13.75 for dining room; $5.30 for laundry; $0.60 for cleaning utensils; a total of $62.50. As for methods of teaching, Miss Keech recommends that the class should be informal, and the method developmental; that is, stereotyped questions and answers should be avoided, and remarks, suggestions, and reasons for the procedure should be sought from the girls. Each girl should be given

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[1] Page 11, in How to Teach Kitchen Garden or Object Lessons in Household Work: Emily Huntington, Doubleday, Page & Co., New York. 1901. Miss Katharine B. Peck, 132 West Twelfth Street, New York City, may be addressed for kitchen garden supplies.

[2] Training the Little Home Maker by Kitchen Garden Methods: Mabel Louise Keech, Philadelphia. Lippincott. 1912. See also Colson, Elizabeth and Chittenden, Anna Gansevoort. The child housekeeper. Simple lessons, with songs, stories, and games. New York. A. S. Barnes & Co., 1903, viii, 187 p. illus. 12°.

A. THE CRETE PLAN.

Cooking lessons for high-school girls in a home kitchen with a home woman as teacher.

B. HIGH-SCHOOL TAILORING CLASS, HOLLYWOOD HIGH SCHOOL, LOS ANGELES, CAL.

A. THE VISITING DIETITIAN IN A CITY TENEMENT.

Lesson in home economy by a worker for the New York Association for Improving the Condition of the Poor.

B. KITCHEN IN A HOUSEKEEPING FLAT. STUDENTS IN THE CONTINUATION SCHOOL OF BOSTON, MASS.

an equal chance—better two brief turns as leader than for one to work till the others grow restless. Songs are made much of, but are used before and after the lesson. The lessons outlined include, among other topics, table setting, sweeping, bed-making (including the invalid's bed), washing dishes, kitchen work, laundry, polishing silver, general cleaning, serving, guest room, table decorations.

It is evident that if the original kitchen-garden method can be criticized because the miniature toys given to each individual may seem too unreal, the modified method with one set of larger toys for class use reduces hand activity to one, two, or three girls, while the others wait their turn. Good teaching doubtless can arouse interest and secure mental reaction under either system, however, and that is the essential thing.

The kitchen-garden methods, modified in one way or another, have been applied in the lower grades successfully. One application has been the teaching of habits of personal hygiene, for example, the use of toothbrush, through the medium of a doll in the classrooms. As a definite system, however, kitchen garden finds its best direct application, as a supplementary educational agency, in industrial schools, settlements, churches, and Young Women's Christian Association classes. Of 225 settlements reporting some instruction in household arts, 38 (16 per cent) provide kitchen-garden classes for small children.

It is "playing house," as little girls used to do in kitchens, on the back steps, and in the old-fashioned attic, but play on an organized basis and with an educational aim. With the great turning toward organized recreation in all forms made necessary by urban living, it is evident that kitchen garden has great resources in play activities for younger girls. It might profitably be widely applied in model housekeeping flats for younger patrons; in school centers for after-school activities; in indoor playgrounds; in fact, wherever the problem is to provide for the girl of 8 to 12 years a pleasant diversion that has an educational by-product of evident worth.

Section 8. CREDIT AT SCHOOL FOR HOUSEWORK DONE AT HOME.

Experiments have been tried in various schools relating to instruction in the household arts, with the practice of these arts in the home. Popularly expressed, the child is to "get credit" at school for housework done at home. Such cooperation means that the school does not attempt to furnish all the necessary hand training in the practical arts, such as agriculture, cooking, sewing, carpentry, etc., but relies in part upon outside practice—this, of course, in as systematic and well-ordered ways as possible. It may be interpreted, as Dean Arnold, of Simmons College, has said, as a movement to make the school responsible for educational values in the entire circle of the child's life, in school and out.

At first thought the plan might seem, if skillfully organized, to promise relief from the need of teaching household arts in school at all. Such a suggestion is misleading, however. Cooperation with the home may, as suggested in section 9 below, make possible some beginnings where the school can not provide special teaching of household arts. Generally speaking, however, credit for practice work at home will not lessen the school's responsibility in household arts teaching. Provision for laboratory equipment and skilled instruction must be made as before. It would promise, however, to add vitality to teaching, to emphasize the useful outcome, and to unite school and home.

There are difficulties in the plan: The obvious variety of standards which must control the different housewives in judging their children's work; the adjustment in school marks and graduation requirements between pupils who are credited for home work and those who do not undertake it; the possibility of injuring home altruism if the child infers that unless home work is paid for in school marks it is not worth doing; the desirability of active cooperation between mother and teacher, which means a larger burden for the teacher. One superintendent has attempted to solve the problem of crediting outside work in industrial shop courses by accepting only that for which money compensation has been earned—i. e., such efficiency as will command a wage merits school credit—but this solution has little or no bearing on instruction in household arts, since the household work is necessarily unremunerated in money, and any general attempt on the part of parents to pay wages to their own children of school age for housework would, in all probability, prove socially inadvisable, as contrary to the genius of the family relationship.

The plan to utilize home work as a practice field in household arts teaching seems fundamentally sound, however, and may become an important auxiliary method. A typical experiment—that of the schools of West Chester, Pa.—is thus reported by Supt. A. L. Jones in June, 1913:

> We have been giving credit for home industrial work for about a half year. It has been commended by everyone. Many parents have spoken with me concerning the good we are doing by crediting in school what the pupils do at home. They report that the children do more work, do it better, and always willingly; that they have noticed that the home work is becoming habitual with their children. We credit all kinds of work, but not lessons recited in school or practice in music. Probably two-thirds of the pupils who have opportunity use these cards.

The plan was announced by a circular letter to parents. The parents send weekly reports on a form card, with work classified as (1) darning and sewing, (2) cooking and baking, (3) general housework, (4) other work at home, (5) work for wages away from home. The report shows the number of minutes per week and the quality marked on a scale of a 100. Ninety minutes a week for a month is the minimum work taken into account, and "the credit for home industrial work will be arranged with the school work in manual arts."

Similar experiments are under way in the schools of Oregon; in the rural schools of Adair County, Mo.; the city schools of Boise, Idaho; and in many other places throughout the country.[1]

Section 9. INSTRUCTION IN HOUSEHOLD ARTS WITHOUT SPECIAL TEACHERS.

It is important to recognize that instruction in household arts in the grades and rural schools need not wait on the appointment of special teachers, although its first introduction into larger places is doubtless best undertaken on that basis. The instruction in sewing has very commonly been done by regular grade teachers; the outcome of some experiments indicates that a better educational result is secured in the first six grades by having all manual and industrial work given by the regular grade teacher, although size of classes and ignorance of new subject matter make the plan difficult of general adoption. The suggestion of Miss Ricker, in the Maine Elementary Course of Study in Household Science, that if no actual cooking is possible, "some of the theory of domestic science, especially along the lines of sanitation, hygiene, etc., may be presented," points one way of beginning. There is the possibility of emphasizing practical issues in teaching the regular school subjects, a method good teachers always employ. Many teachers have also found it possible to set problems in cooking and sewing at school to be carried out at home, and the results reported at school for discussion.

In high schools the necessity of the special teacher is increased, and doubtless becomes imperative if the vocational ideal in training is to be achieved. Even in high schools, however, there are the possibilities of instruction related to the home in applied-science courses in biology and chemistry, and in the Crete plan of instruction by home women acting as teachers. Since the latter is a method generally applicable, it may well be explained at this point.

About 1905 the public schools of Crete, Nebr., instituted a plan of teaching domestic science lessons in the homes of citizens with the women of the town acting as instructors, and the children of the high school going about in turn from home to home for the successive lessons. The plan has been in successful operation in Crete ever since and has been adopted in 50 or more high schools in Nebraska and neighboring States. The plan was to secure the cooperation of women able and willing to teach cooking of some given article of food. Lessons on 20 different topics were thus provided. The girls would come at the set time and meet for a discussion of the lesson in the parlor or sitting room, taking notes methodically. The instructor usually prepares the article for cooking, and sometimes cooks the article in the presence of the girls. With meats and poultry the article is prepared for cooking. Classes usually number at least 6, and 10 is considered better. Half past 3 o'clock is the usual meeting time. Students usually do not go to a class oftener than once a month, since there are about 20 articles in the cooking course, and the four years of high school are allowed for its completion. Usually a girl learns to make about five articles a year and visits a class only once for a lesson on each article, though she may attend as many times as she likes. Each instructor has a fixed day for her class. After the lesson the girls carefully try the recipe at home, receiving help from any source at this time. After several trials of the recipe the student is free to substitute her own procedure. Much is made of exhibits and demonstrations of the results of the instruction, with competitive judging of products at the completion of the course, which is marked by a graduation banquet and a certificate. There is no expense on the part of the school or on the part of instructors, since they use the product in their own families.

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[1] School credit for home work in home economics. Grace Schermerhorn. Journal of Home Economics, 6 (1914), p. 141. See also, Connecting the school with the farm home. Journal of Home Economics, 5 (1913), p. 203.

Some of the results of this system of teaching domestic science at home by home women are as follows: The girls see the interior of many good homes and gain impressions as to good household furnishings. The girls become interested in cooking, and "as a result many of them are found at the proper time in the kitchen or dining room while their mothers are entertaining callers in the parlor." There is marked improvement in the food in the girls' homes. The girls become practical cooks and take charge of the housework during vacations and in emergencies. There is a good influence from the instructors upon the girls, and vice versa. Some one has said, "It is the most democratic plan of cooperation and the best method of philanthropy yet discovered." "The Crete plan is best suited to villages up to about 3,000 population. With slight modification it can be used in rural schools."[1]

The school lunch,[2] which has been introduced now into upward of 70 American elementary schools, and much more commonly into high schools, is primarily important as a means of supplementing the diet of children who are in school. It has an educational by-product, however, which is of distinct home importance in that it helps fix food standards for children. The provision of a warm lunch has been a means of introducing household instruction into many rural schools. In country districts the lunch has therefore a high educational importance, as well as its obvious health value. The educational results of a system of school lunches in city schools has been well stated by the school-lunch committee of the Home-School League of Philadelphia, as follows:

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[1] Domestic Science. Crete plan. Department of public instruction, Lincoln, Nebr., 1911.

[2] School Feeding, Its History and Practice at Home and Abroad. Louise Stevens Bryant. Lippincott, Philadelphia, 1913.

> Direct: Obvious advantage of warm, attractive, palatable food to the body. Formation of regular habits of eating well-cooked food. Valuable experience in social intercourse, mingling freely with fellows and teachers on a friendly basis. Table manners and social amenities.
>
> Indirect: Correlations with direct instruction in elementary hygiene, physiology, proper mastication, care of teeth, cleanliness. Teaching of food values; instead of tracing the digestion of an imaginary meal, tracing the digestion of school meal; academic versus concrete. Correlation with the pure-food movement; need of Americans particularly for sane ideas about food and its relation to working efficiency. Accustoming the children, especially foreigners, to know and like the cheaper and more wholesome American foods. Little Jewish and Italian children are learning to like hominy and corn meal and simple meat dishes.

Section 10. INSTRUCTION RELATED TO THE HOME, FOR BOYS AND MEN.

Thoughtful critics of the home-economics movement have urged that an education for the home must take account of the boy and man. There is a certain truth behind the retort of the president of one of our women's colleges who when asked when her institution would introduce courses in homemaking, replied, "When men's colleges introduce such instruction." The fact is, of course, that men and women have different relations to the home, and an education for the home would recognize this fact. The home is not woman's only responsibility. We are recognizing that by providing training for women in all vocational fields. The woman should not be considered alone responsible for the home, and we shall recognize this fact in due time by bringing into the education of boys and men something regarding the home as the institution in which their personal living is cast. Just what form this home education for men will take can not yet be stated, but that it will be provided is indisputable, just as education for the other social institutions—industry, education, religion, politics, social economy—has been provided. Some suggestions may be made. First, the problem is not primarily to give instruction in the household arts, although training in cooking and sewing ought to be given to all boys in the lower grades, as it is now in our best elementary schools, and in the form of camp cookery at least in many high schools. Every individual needs instruction in the use of food, clothing, and shelter. The man's home responsibilities are primarily social and economic, and instruction is to be devised for high schools and higher institutions in which boys and girls can be trained in common classes, for the most part, in the principles of sanitary housing and the sanitary occupation of houses; in food principles, which will enable one to select food wisely in health and in disease; judgment of clothing values, artistic and economic, that will bring sanity into an economic chaos; health problems, individual, domestic, and community; the social and economic aspects of the home which will improve ethical standards and increase personal satisfactions in family living. We shall doubtless in time have applied economics courses in high schools that will give not only the principles of wealth production as seen in industry, commerce, and agriculture, but the principles of wealth utilization as they appear in the relation of individual, family, and society to securing satisfactions from wealth. In still closer relation to the home, will be distinctive courses in home economics, which will outline the principles underlying the user's relation to food, clothing, shelter (as distinguished from courses in technique of the household arts), and also include the social and ethical aspects of the home. Such instruction will in due time be taken by boys as well as by girls. In the college, matters of home concern are already made a subject of study in several fields; sociology with its emphasis on the family institution, social economics with its problems of philanthropy and relief which invariably center about the family, economics with its growing recognition of the economics of consumption, chemistry and biology in their applications in nutrition and in hygiene and health; in all these fields, natural science, social science, and ethics, men and women alike are receiving instruction in important aspects of the art of right living.

An inquiry addressed to superintendents of city schools as to household arts instruction for boys was answered as follows: Of 227 schools replying as to elementary grades, 10 schools (or 4 per cent) reported that boys have household arts instruction; of 148 high schools replying, 13 schools (8.7 per cent) report similar instruction for boys. In the lower grades of the elementary schools boys are occasionally taught sewing; probably they are less commonly taught cooking. Evanston, Ill., and South Bend, Ind., have given courses in camp cookery to the boys in the grades; and in several high schools camp cookery has been given. Recent returns from 1,345 high schools show that in 57 schools, or in 4 per cent, boys have registered in home economics courses. The number of boys taking courses is reported as 370, or a little more than one-half of 1 per cent of the number of girls.

Without overemphasizing camp cookery courses for boys, two examples of such classes in high schools may be cited. Miss Hillyer, supervisor of domestic science in South Bend, Ind., reports that in one year she had a class of 40 boys who asked for such a course and went through it with great interest and profit. They were given lessons in plain cooking and one of the results was a better appreciation of their share in the problem of food preparation in the home and greater respect for simple living. The Springfield (Ill.) high school maintained a class in camp cooking with a group of 17 young men, under the direction of Mrs. Lulie Robbins, now of Oregon Agricultural College. The boys applied themselves twice a week in the cooking laboratory to learning various ways of preserving foods, especially meats, cooking with condensed milk, and making seasonable and appropriate camp dishes. Camp equipment was also discussed, and the enthusiasm of the class was maintained to the end of the year.

At the third annual meeting of the American Association for the Prevention of Infant Mortality the section on continuation schools discussed the possible education of youths and men in home economics, with this topic:

> The education of youths and men, through continuation schools and classes, including those primarily intended to increase wage-earning capacity, in the responsibilities and duties of home making other than supplying money; e. g., the elements of house planning and sanitation, of eugenics, first aid, contagion and disinfection, repairing furniture and clothing; of pure food and dietary principles, home gardening and beautifying.

C. A. Prosser presented a paper the conclusion of which was that such instruction will come about—

> so far as men are concerned at the present time, not through formal classroom instruction in home duties for males only, but through the social and recreation work which the schools are yet to develop extensively, and through which, by entertainment and talk and lectures and moving pictures, carefully and tactfully presented among other interesting and helpful subjects that make for good citizenship, men, usually along with women, will have set before them the information and the illustration which will lead them into a better discharge of the duties and responsibilities of their husbandhood and parenthood.

A paper on "Home economics in the United States for men and boys" was presented at the same meeting by Dr. C. F. Langworthy, of the United States Department of Agriculture, which showed that here and there boys and men have already interested themselves in instruction in cooking, in dietetics, and in other subjects of home interest. In several high schools, normal schools, and colleges boys are taking courses in camp cookery. In several instances medical students have sought instruction in dietetics, a common item in the curriculum of European medical schools. In the agricultural colleges men have sought instruction in camp cookery, and courses have been offered for forestry students, engineers, and others. Training of professional men cooks has been provided in various ways.

Another bit of evidence worth considering in this connection is the interest shown by men in industrial communities in demonstrations and talks on better food and cooking arranged primarily for their wives.[1] Public lectures on housing, problems of dress, food, and other household matters usually bring together men as well as women.

In summary one may note that man's home responsibility is ethically equal to woman's. As we have lately been emphasizing woman's responsibility for municipal and civic matters, so we may urge that men become more conscious of the home and their relation to it. No movement, educational or otherwise, which seeks to benefit the home will succeed until the cooperation of boys and men is secured. It takes two to start a home and the child has a father as well as a mother.

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[1] See Part II of the report, Bulletin, 1914, No. 37.

EQUIPMENT FOR EDUCATION FOR THE HOME.

Section 1. EQUIPMENT FOR TEACHING HOUSEHOLD ARTS IN PUBLIC SCHOOLS.

In selecting equipment for household-arts instruction in public schools, attention should be paid to (1) The requirements of this type of teaching. Equipment should be adequate for efficient classroom work; a room large enough, but not too large, with a floor plan that facilitates work, and sufficient equipment so that simultaneous practice may be afforded each member of the class; too many utensils may be as detrimental as too few, consuming time and not giving occasion for ingenuity; the household-arts teaching should not be handicapped by a laboratory located in the basement. (2) the community situation—conditions and equipment should be such as children have at home and should offer "incentive to the bettering of home conditions;" the use of electric stoves in a town where gas, coal, and wood are the common fuels is not to be recommended; the children must not be educated above the home, though the homes may well be elevated.

Cooking equipment.—The essentials of cooking equipment for schools are a room large enough for unit cooking equipments for the given class number; the equipment usually arranged in continuous tables in a hollow square, with gas plates above and storage space below; one or more kitchen-size ranges for class use; wall cupboards for storage of utensils not kept in pupils' outfits; food storage, if possible a small adjoining pantry, and facilities for table service—a dining table, chairs, linen, dishes, etc.

A cookery laboratory of 19 by 26 feet will accommodate 20 pupils without extreme crowding, providing room for cooking tables with gas plates, two gas stoves, and two sinks, but without room for wall cupboards or a dining table in the center. A cooking laboratory 26 by 38 feet, or better, 30 by 40, gives space for 20 to 24 pupils and allows room for cupboards and equipment at the sides or ends, and a dining table in the center of the square. The food-storage room and the diningroom may each be about 12 by 16 feet; such a diningroom will accommodate a table for 8, sideboard, and china closet. A small room fitted like a home kitchen with range, sink, food and utensil storage, adjoining the diningroom and the laboratory kitchen, is a desirable feature of equipment.

A prime question is whether such rooms shall be located in the building with other school rooms or whether all household-arts rooms shall be brought together in a model house or cottage. There is a tendency at present to emphasize the home idea by providing a cottage or apartment of rooms arranged like a house. There are great advantages if the house can be actually occupied by the students, and many thoughtful persons are urging that satisfactory instruction in housewifery, sanitation, and management requires instruction and practice such as can be given only in residence. The cottage method is already common in normal schools and colleges, but how far it can be adopted in public schools is a question. Cooking laboratories will evidently be required to handle large numbers; but life in a practice house or apartment as a method of teaching is quite within the possibilities for upper grade and high-school vocational classes. Even if there is not actual residence and sleeping at such a center, activities there through an extended period of hours, involving the getting and serving of a meal, entertainment of friends, with care of house, etc., seem entirely feasible. The continuation instruction in the Providence and Boston centers points this way. From the point of view of teaching cooking alone, the school laboratory has advantages over a cottage. It is evident already, however, that the purpose of household-arts education is not only to teach the household arts as processes, but also to furnish a new motive in homemaking. For this purpose the increasing use of cottages and centers which approximate a home in furnishings and atmosphere is obviously soundly justified. The cottage, of course, provides means for other instruction as well—cleaning, laundry work, sewing, etc.

The cooking laboratory laid out with long parallel tables or with long tables converging toward the teacher's desk or, more commonly, with tables arranged in an oblong hollow square, makes it possible for the teacher to see easily all the members of the class at work. Movable tables, or table tops on horses, may be used for temporary or inexpensive installation, but usually built-in tables with gas and water connections are provided; gas being supplied to a gas hot plate or small stove at the back of each unit of table-top space. One or more sinks with hot and cold water are usually provided, often at the ends or corners of the hollow square. In colleges and higher schools, "group tables," each occupied by two or more students, have proved satisfactory; as also the double parallel or long back-to-back tables, similar to the common chemistry block table. In college work the detached table or kitchen cabinet with separate kitchen range and small sink has been used, thus providing each student with a unit kitchen outfit comparable to the home kitchen.

The school kitchen should, if possible, be located on the top floor to control odors; never in the basement. Usually a hardwood floor will be found most desirable, or a floor covered with inlaid linoleum. Tile flooring, composition, or terrazo (if laid in small squares separated by narrow strips of marble to prevent cracking) may be used. Ample blackboard space, cupboard storage, and a bulletin board are necessary. If the building has a fan ventilating system, hoods made of glass should be put over the block of stoves and connected with the exhaust. The individual gas stoves may be built up by a local plumber; Bunsen burners may be used with a grill above, or small one-burner gas hot plates can be secured. They should permit easy cleaning, be rigid, and of open grill rather than solid metal, as the latter radiates much heat. A grill on which the small portable sheet-iron oven can be placed has in this respect an important advantage. There should be one or more complete ranges to give experience with other fuels and practice in larger undertakings. One or two large sinks are essential; several small sinks add to convenience.

Tables should be 30 inches high, 20 to 26 inches deep, and should allow 30 inches working space per pupil. A drawer beneath the table, with a slide space between it and the top for the bread board, is desirable. The drawer can be partitioned for utensils and finished in shellac. Below the drawers there should be a cupboard with door, or better a roll front, providing storage for large utensils. A food-supply drawer may be placed between each two utensil drawers, the space beneath it affording room for a swing seat carried on a bracket. Table tops are best of white vitrified tiling; or of hardwood. If of wood, a zinc mat, asbestos lined, or an aluminum or other fire-proof strip may be placed at the back, beneath the stoves. A teacher's supply table, with drawers beneath to hold food supplies, and on large castors to roll from the supply room, is essential. A refrigerator and fireless cookers, home-made and commercial, should be provided.

Utensils should be of good quality, without seams, cracks, or angles where food may collect. Enamel ware is to be recommended for measuring cups, plates, pitchers, saucepans, and those utensils where heat is not too intense. Frying pans should be of steel; earthenware should be used for bowls, jars, etc. Of certain utensils, one for each pupil should be provided; of others one for 2, 4, or 10 pupils; and of others one for the class. A reasonably complete equipment of utensils costs $160 for a class of 20.

An estimate as to the equipping of a laboratory for $500 is as follows: Cooking table, single drawer, maple top, ash frame, $100; 20 small stoves, $30; 20 stools, $10; 2 gas ranges, $37; refrigerator, $15; porcelain sink, $25; 2 kitchen cabinets, $19.50; utensils, $160;

dining-room table and chairs, $20; linen and china, $30; supply table, $8; home nursing equipment, $10; laundry equipment, $30; housework equipment, $4. Total, $498.50. It is to be noted that an oak cooking table for 20 pupils will cost $500 if finished with a maple top, and $700 with a tile top; so that the $500 figure for the complete installation as above is a minimum figure. Tile tops may be figured at about 50 cents a square foot, and glass tops at $1.70 a square foot.

In laying out a laboratory, detailed information is available; most of the State departments of education and State colleges and universities are ready to furnish information; and Prof. Kinne's "Equipment for Teaching Domestic Science" [1] should be consulted for details as to floor space, working drawings of desks, comparative costs, lists of equipment, and utensils. In erecting new buildings, boards of education will find it convenient usually to include the cooking laboratory desks on the furniture contract and have them built in; or, if desired, one can now secure several types of commercial domestic-science desks ready to install.

The school lunch in some high schools and colleges is administered by the domestic-science teacher, and its equipment is therefore to be considered. A gas range, soup kettle, steam table for keeping food warm during the service, refrigeration, are important items of equipment; the service is usually by trays, the individual selecting the food from a counter, and the charge being made by a cashier at the end.

Sewing rooms.—Sewing instruction in the elementary schools is often given in the regular classrooms; special rooms are provided for more advanced work. The essentials are a room 24 by 36 or thereabouts for a class of 20 to 24; good light, preferably from the north, and adequate artificial light for dark days; sewing machines, one at least with a motor attachment of the household type (not a commercial motor-driven machine unless for trade work); lockers; a fitting room; and work tables, a good type of which can be made with hardwood legs and removable tops made of soft wood unfinished, so that they can be planed off as necessary when worn by the tracing wheel. Such tables should be made with stretchers for foot rests; drawers beneath tables interfere with knee room. Drafting and sewing tables may be 3 by 7 feet and 32 inches high; and tables for millinery and hand sewing about 2 by 5 feet and 28 inches high, the latter all of hardwood.

The sewing room may be provided with individual student lockers each about 9 inches high, 15 inches wide, and 24 inches deep, with hinged doors and locks, built eight lockers high; in millinery rooms the lockers should be 12 by 20 inches. Or there may be provided pasteboard boxes for students' work, and these may be stored on a shelf between classes. Large storage space for dresses should be provided in high-school laboratories; a convenient plan is a cupboard 6 feet high and 30 inches deep, with a pole for coat holders placed lengthwise at the middle, 6 inches from the top. The fitting room, with mirror, can be provided in one corner of the room by curtaining off a space 6 by 10 feet.

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[1] Published by Whitcomb & Barrows, Boston—a book to which this discussion is indebted.

A small sink for water supply and a gas or electric iron with ironing board (the latter may be arranged as a cabinet conveniently) should be placed in each room where fabrics are treated. In each sewing room there should be a teacher's cabinet for materials.

Instruction in textile fabrics and materials require one or more microscopes, with dyeing kettles, tripods, Bunsen burners, test tubes, chemical reagents, etc.; such instruction in high schools may well be given in the chemistry or biology laboratory.[1]

Laundry.—It is recommended that laundry laboratories be equipped in public schools and high schools, and that laundry be taught as a household art which has vocational as well as domestic possibilities of great importance. In England laundry is given nearly as much attention as cooking; and equipment is provided accordingly. Where possible, a separate room with tile floor and equipped with fixed tubs, ironing boards with gas irons, and steam drying room should be installed. This equipment is essential in technical high schools and for the vocational work of the upper grades. A room 24 by 36 with a storeroom adjoining will provide facilities. Small power machines, washers, wringers, and mangles suitable for home use should be installed, and the possibilities of water power, electric and gas power studied. Tubs should be of white enamel, not yellow, as the latter gives no color contrast for the linens in process of cleansing. Where no separate room is available, it is usual to provide portable laundry equipment in the cooking laboratory, consisting of soap cooker, starch kettle, fiber tubs, washboards, wringers, flatirons, folding ironing boards, clotheshorses, clothes basket, line, pins, etc. For such teaching, equipment costing $60 is sufficient. It is noteworthy that the Ontario education department, which sets a good example in providing more adequately for laundry instruction, places the value of equipment at $150. For a complete laundry laboratory, with steam-drying room, $750 would be an approximate estimate. The addition of power equipment—washer, extractor, and mangle, all electric-driven—in a technical school, may add $2,000 to the cost. An estimate for the laundry laboratory of a college or a technical school has been furnished, as follows: Metal clothes washer, $250; 20-inch extractor, $135; 75-inch return apron mangle, $600; 10-gallon starch kettle, $25; metal steam drying room, $350; 10 skirt-ironing tables, $150; zinc-covered starch table, $15; 7½ horsepower motor, $250.

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[1] For further details address the various State education departments or State universities; see also, "Domestic Art in Women's Education," Anna M. Cooley, Scribner's.

Cottage or apartment for household arts teaching.—In many towns and cities the public schools have provided cottages or apartments for teaching household arts; this type of equipment will be increasingly used as emphasis is put on vocational training in the household arts in the public schools. A good illustration is the public schools of Greenfield, Mass., in which a cottage was purchased for grade use and a larger house for high-school use. In the grade cottage, instruction is given to girls in the seventh, eighth, and ninth grades for one and one-half hours a week; classes are divided into two groups, the regular teacher giving sewing to one group, while the special teacher gives cooking and household management to the other.

> The idea is to have the girls work under conditions as nearly as possible like those existing in an ordinary home. To accomplish this purpose, the kitchen is furnished with both a coal and a gas range, so that the girls may have experience in using both, and here four girls work together conveniently, two at each stove. Meanwhile, the rest of the class are accommodated in the kitchen laboratory, a room adjoining the kitchen, which has been fitted up with long tables, common-size gas stoves, and other necessary conveniences of a kitchen. An important phase of the work has been the making of soup, or cocoa, which is sold at 1 cent a cup to the children who take cold lunches to school. A pleasant feature of the work has been a series of receptions given each week by the different classes of girls to their mothers at the grade cottage. These occur Friday afternoons from 3 to 4.30 o'clock. The Mothers' Club has presented the grade department with a complete set of china and silverware, and many thanks are due them for their interest and cooperation.

The schools of Park Ridge, N. J., a town of 1,800 population, have secured a satisfactory equipment for household arts by renting a two-story concrete building erected originally with two stores below and two 4-room apartments upstairs. One of the store rooms is fitted for domestic science, the other for manual training; the apartments are leased to teachers; the whole is maintained as a model house, the children doing the work from scrubbing the floors to making beds, serving luncheons, etc. From September 9 to December 31, 1913, food costing $202.87 was served and sold for $347.63.

Another example of new equipment, patterned after the home situation, is in Crawfordsville, Ind., where the high school has provided a school kitchen, dining room, bedroom, bathroom, and sewing room, adjoining on one floor of the high-school building. So the Hollywood High School, Los Angeles, in its $20,000 household and fine arts building includes a demonstration flat.

Provision of separate laboratories in household arts.—In the schedule of inquiry sent to superintendents of schools, the question was asked whether separate sewing laboratories are provided in the elementary school, or whether instruction is given in regular classrooms. Of the 362 cities that replied, 248, or 68 per cent, give sewing instruction in the regular class rooms. Of 274 elementary schools teaching cooking, 73 (26.6 per cent) report that cooking laboratories are provided in the separate school buildings, and 201 (73.4 per cent) that cooking laboratories are provided at "centers." Therefore, in something over a quarter of cases only is cooking taught in the various elementary school buildings; in three-fourths of the cases central laboratories or "centers" are used. In elementary-school sewing instruction, on the other hand, in nearly three-fourths of the schools instruction is given in the regular classroom, and no special sewing rooms are provided.

Cost of elementary school cooking laboratories.—One hundred and eighty-six schools gave statements of the cost of cooking laboratory equipment for elementary schools, which vary from $50 to $3,000; the median cost is $500, and for 50 per cent of the schools the cost varies between $350 and $750. The distribution of costs follows:

TABLE 1.—*Cost of elementary-school cooking laboratories.*

Costs of equipment.	Schools reporting cost.	Costs of equipment.	Schools reporting cost.
$50	2	$600	12
75	1	650	3
80	1	671	1
100	5	675	1
150	2	700	14
175	1	730	1
190	1	737	1
195	1	750	4
200	7	780	1
212	1	800	7
250	7	900	7
300	20	969	1
350	6	979	1
360	1	1,000	11
375	2	1,100	1
400	15	1,165	1
435	1	1,200	2
450	3	1,500	4
500	27	2,000	3
550	2	2,800	1
560	1	3,000	1
563	1		

Illustrative material for household arts teaching includes charts, illustrations, models, samples which illuminate points of fact and processes in the work of instruction. Charts showing the percentage composition of certain foods, compiled by Dr. C. F. Langworthy, of the United States Department of Agriculture, are on sale by the Superintendent of Documents, Washington, D. C. Illustrations of cuts of meat may be obtained of Pratt Institute, of Teachers College, and of the Philadelphia public schools. The food museum has been developed by some schools. In textiles, the most useful material is a teaching collection of the various fabrics most commonly used in a community, each marked with its price and uses, and made the basis of training textile judgment; also, illustrations of good color combination and good designs. For teaching shelter, samples of building materials, charts of plumbing, a model of a house showing framing, etc., samples of equipment for cleaning and of household utensils, have been found useful. Manufacturers furnish much free exhibit material.[1]

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[1] See "List of Firms Furnishing Equipment and Laboratory Supplies for Household Arts Teaching." Publication bureau, Teachers College, New York City. 10 cents.

Laboratory care.—The care of cookery laboratories and of dishes and utensils in laboratories has been a mooted administrative point. In reply to the question, "Does janitor help with service in cooking laboratory?" 67 cities answered "Yes," and 70 "No." Some questions were qualified, indicating that the janitor was responsible for care of floors, for garbage disposal, and so forth, rather than for any definite assistance in the laboratory work. In reply to the question, "Is extra service hired?" 8 cities answered "Yes," and 38 "No." In reply to the question, "Are teacher and class entirely responsible?" 84 cities answered "Yes," and 7 answered "No." It is evident, therefore, that present usage calls for care of laboratory dishes and utensils in public school work by teacher and pupils without special hired assistance, as of a laboratory maid. Janitors give some assistance regularly in the care of the room, the same as given to other schoolrooms, and probably in a small proportion of cases they give part-time aid of the sort that a maid might give. Drudgery of any sort is poor economy, and drudgery imposed upon an expert special teacher who receives a salary of $1,000 a year is indefensible. School officials should expect to furnish help and labor-saving devices for all cleaning work in the laboratory that is without direct educational value. To burden the domestic-science teacher with this type of drudgery is to retard the introduction of the subject and hamper its teaching when introduced.

Section 2. EQUIPMENT FOR HOUSEHOLD TEACHING IN HIGH SCHOOL.

The usual high-school equipment consists of one or more single rooms as sewing laboratories, or cookery laboratories, each with its proper equipment, whether of drafting tables, sewing machines and lockers, or of cookery tables, stoves, and storage for utensils and dishes. Sometimes these rooms are arranged en suite, thus providing for the food instruction one or more food laboratories with adjoining storage rooms for foods and utensils, a dining room, where table-service exercise may be conducted, and a small room equipped as a home kitchen; and for the instruction related to textiles, one or more sewing rooms, with adjoining storage rooms and fitting rooms and sometimes a store for selling textile materials. Again, a laundry laboratory, bedroom, and bathroom as a laboratory for teaching are only less frequently provided. More and more these rooms are provided in one organized unit as a "model," or better, a "practice house" or "apartment."

A laboratory arrangement modeled on the cottage idea is the set of demonstration rooms—home kitchen, dining room, bed room—arranged as booths opening into a classroom, provided at the Wash-

A. DINING ROOM IN A HOME ECONOMICS BUILDING. IOWA STATE COLLEGE, AMES, IOWA.

B. SENIOR NORMAL COOKING (DIETETICS). SCHOOL OF HOUSEHOLD SCIENCE AND ART, PRATT INSTITUTE, BROOKLYN, N. Y.

ington Irving High School, New York City, so that lessons given in the different rooms are under the eyes of the class in the classroom.

An emergency room, with equipment for instruction in first aid and care of sick has been provided, notably at Newton, Mass. Similarly, a nursery is provided at Crookston, Minn.; while a reception room is part of the equipment at Saginaw, Mich. A lunchroom, i. e., a dining room on a large scale—sometimes the school lunchroom—is occasionally included in the domestic-science equipment, and this tendency may be expected to grow as children in all divisions of practical arts undertake more projects of real utility. Viewed educationally, household arts will only be taught adequately when a real practice field is provided for all phases of housework with the responsibility that belongs to a real living situation. It has, therefore, been urged that in urban communities, at least, housekeeping centers must be organized as an integral part of the public-school system in which selected groups of girls shall live for a week or more to perform personally and in due course all the duties of the housekeeper. Certainly any adequate training must include real practice, either in the children's own homes or in such practice homes as have been described.

Cost of high-school equipment for home economics.—For 192 high schools stating the cost of sewing equipment, the cost varied from $20 to $2,739; the median cost was $200, and for 50 per cent of the schools the cost lay between $120 and $320. For 237 high schools stating the cost of laboratory equipment for food courses, the cost varied from $75 to $5,000; the median cost was $500, and for 50 per cent of the schools the cost lay between $400 and $854.

A distribution of the costs as reported follows:

TABLE 2.—*Cost of high-school food laboratory equipment.*

Costs.	Schools reporting.	Costs.	Schools reporting.
$75	2	$700	11
80	1	730	1
100	6	750	6
125	1	780	1
150	6	800	14
175	1	850	2
200	7	854	1
250	4	900	5
300	19	989	1
320	1	1,000	16
350	4	1,100	1
375	2	1,150	1
400	19	1,200	5
434	1	1,350	1
435	1	1,357	1
450	2	1,384	1
500	42	1,500	10
550	1	1,644	1
560	1	1,900	1
570	1	2,000	6
575	1	2,234	1
590	1	2,500	2
600	16	3,000	3
614	1	3,500	2
671	1	5,000	1

TABLE 3.—*Cost of high-school sewing laboratory.*

Costs.	Schools. reporting.	Costs.	Schools reporting.
$20	1	$275	1
30	3	300	24
50	9	312	1
52	1	320	1
60	1	325	1
70	1	332	1
75	11	350	4
80	1	375	1
85	1	400	6
90	1	432	1
100	26	450	2
119	1	500	17
120	1	550	1
125	3	570	1
126	1	600	8
145	1	750	1
150	10	768	1
155	1	800	3
175	5	905	1
200	29	1,000	5
220	1	1,200	1
228	1	1,500	1
250	15	2,000	1
267	1	2,739	1

Section 3. EQUIPMENT IN INSTITUTIONS FOR TRAINING TEACHERS—NORMAL SCHOOLS.

Equipment in institutions for training teachers should give intending teachers a varied experience: (1) With inexpensive and inadequate equipment, so that readiness to meet emergencies may be developed; (2) with home-made equipment, as by the construction and use of a packing box or kitchen table, cabinet with oil stove, to prepare for rural school conditions; (3) with various fuels—kerosene, wood, and coal, as well as gas and electricity, and if possible with gasoline and acetylene gas; (4) with a home kitchen equipment of the most meager kind, such as graduates will be called upon to use in visiting teaching. Where training school or college equipment is very complete, special pains must be had to prevent the attitude that anything less complete is inadequate and impossible. There is needed ability to do "tomato-can cookery." The practice house with required residence for giving all-round household practice is especially important in teacher training.

Home-economics equipment for State normal schools.—Laboratory equipment was reported upon by the normal schools as follows: For instruction in foods and cookery, 69 schools report a special laboratory and equipment, and 3 schools report two such laboratories, 65 schools report a dining room for laboratory instruction in table service (one of the number reporting two such dining rooms), while 7 report that no dining room has been provided; and 2 schools report the use of a cafeteria for teaching purposes. For instruction in sewing and textiles, 67 schools report a special sewing laboratory (of this number 6 schools report two such sewing laboratories and 3 schools report three laboratories); while one dressmaking room, one drafting room, and one millinery room in addition are reported. Other special laboratories for household-arts instruction are also reported in the normal schools; four laundry laboratories, three emergency, first-aid, and home-nursing laboratories, one practice living room, and three laboratory rooms equipped as bedrooms. Finally three normal schools report a complete unit equipment for instruction in the form of model or, better, practice houses; while the Stevens Point (Wis.) Normal School is erecting a building for domestic science and art, to cost $70,000, and in addition two cottages where senior students will live in groups of four from three to four weeks for their practice housekeeping.

Cost.—Fifty-nine public normal schools reported their cost of equipment for home-economics instruction, the cost ranging from $100 to $20,000. The median of the costs reported was $1,000, and half the schools have equipments which cost between $600 and $2,000; 11 schools reported $1,000 as the cost; 7 schools, $1,500; 8 schools, $2,000; and 7 schools, $5,000 or more.

Section 4. COLLEGE EQUIPMENT FOR HOME ECONOMICS.

In response to the inquiry addressed to colleges, 83 such institutions report that they have special equipment for home-economics teaching; 59 report the cost of special laboratory equipment, the range of costs varying from $75 to $13,000, with the median cost $1,150. This latter sum, therefore, may be taken as the cost of an average laboratory equipment for college instruction in home economics at present, though the expense for laboratories may be ten times that amount, without taking into account the construction of a special building. Of 15 colleges and universities reporting the cost of special home-economics buildings, the cost varies from $5,500 to $448,000, the latter the household arts building at Teachers College, Columbia University; the median cost is $62,000 to $70,000. From $75,000 to $200,000 probably better represents building costs in the State colleges and universities. Some of the figures may be quoted here: Kansas State College, building and equipment, $83,000; Iowa State College, similarly, $91,000; Michigan State College, $105,300; New York State College, Cornell University, $184,000. There are a number of buildings in the universities and State colleges either under construction or projected, at costs from $100,000 to $200,000. Copies of architects' blue-print plans of household science buildings can often be secured, at cost, by institutions planning new buildings.

Practice cottage, Denton, Tex.—A demonstration cottage at the college of industrial arts, Denton, Tex., with five rooms—a living room, two bedrooms, dining room, kitchen, reception hall, back hall with closet, bathroom—is occupied by senior students in groups of three, each group for three weeks. The students serve in turn as cook, assistant, and housekeeper, the work being under the supervision of the teachers of domestic science, one of them living in the cottage as chaperone. The cottage was furnished by the students at the following cost: Furniture rented, $170; furniture loaned, $25; draperies, rods, etc., $25; linen loaned, $25; silver loaned, $25; glass loaned, $3; stove and oven, $21; other kitchen equipment, $40; making a total of $314.

Practice house, Winthrop College.—Winthrop Normal and Industrial College, at Rock Hill, S. C., has excellent provision for instruction in domestic art and science. A special feature of the equipment is a practice house on the college campus, secured at a cost of $10,000, equipped to give senior students practice in every detail of housekeeping. Miss Bessie G. Chamberlayne, resident instructor in the practice house, furnishes the following description of the house and its use:

> The practice house is furnished simply, the sitting room, hall, and instructor's office in mission furniture, with a few rugs of an inexpensive kind, several good pictures, photograph copies of the old masters. The furniture of the dining room is oak, cane-bottomed chairs, and a combination sideboard and china closet made by the college carpenter. The bedrooms are furnished with white iron beds, oak bureaus, tables, etc., similar to those used in the dormitories. In the kitchen there is a gas range, the gas for which is supplied by a gas machine placed in the cellar of the house.
>
> Each member of the senior class has two periods of eight days each in the practice home. The girls make up their own groups, so that they may be a congenial set, and during the eight days live in the practice home with an instructor, going over to the other part of the college only for their classes, which are continued regularly. There is a schedule for the work during the day, and the eight girls are divided into cooks and housekeepers, the chief cook having control of the diningroom, kitchen, pantry, etc., with assistants under her. The chief housekeeper with her assistants has charge of the remainder of the house. Each knows her own duty for the day, so that there is no confusion and there is a system of progression under which each one in turn has each duty to perform, and when the eight days are over, each has completed the whole work of the house, including all the cleaning, sweeping, dusting, making beds, attending to lamps, arranging flowers for the table, care of plants and chickens. The menus are planned by the girls themselves; menus for every meal are written in a book, with costs for each item and for the meal as a whole, and the per capita cost. Twice during each period of eight days two guests (members of the faculty or visitors at Winthrop) are entertained at supper or at dinner on Sunday, and the chief cook and housekeeper are hostesses for that occasion and preside. The cook's two assistants serve the meal, simply rising from the table to do so, thus showing how a meal can be properly served where there is no maid. In connection with the practice home, there is a garden and chicken yard, and the care of the chickens is part of the daily duty. In time it is hoped to have an up-to-date laundry, with labor-saving devices, and also a dairy.

Dining room, H. Sophie Newcomb Memorial College.—The diningroom of the home economics department of the H. Sophie Newcomb Memorial College, Tulane University, New Orleans, La., was designed and furnished by the students of the university. The furniture was designed by an art school senior, the electric dome and the china were created by the pottery department, and the linen and other furnishings came from students.

Cafeteria, Cornell University.—The home-economics building at Cornell University includes the cafeteria in the basement of the building, seating four or five hundred persons, which is administered as an integral part of the home-economics department. Students who wish to specialize in caring for large numbers have practice in providing food in quantity. The cafeteria thus serves as a practical laboratory in institutional management.

PHYSICS AND THE HOME.

Testing the efficiency of gas ranges and kitchen utensils in the Hollywood High School, Los Angeles, Cal.

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EDUCATION FOR THE HOME

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PART II

THE STATES AND EDUCATION FOR THE HOME
RURAL SCHOOLS
ELEMENTARY SCHOOLS
HIGH SCHOOLS
NORMAL SCHOOLS
TECHNICAL INSTITUTES
VARIOUS AGENCIES AND ORGANIZATIONS

DEPARTMENT OF THE INTERIOR

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EDUCATION FOR THE HOME—PART II.

I. THE STATES AND EDUCATION FOR THE HOME.

The National Government.—While American education is exclusively under the direction of the individual States, so that its organization and administration are determined by their school laws, the Federal Government has in certain limited ways concerned itself with education. Education for the home has specifically been aided (*a*) by the Federal legislation which established the land-grant colleges in 1862, and has since contributed to their development, for in certain of these institutions collegiate education for the home first took shape (see Part I); (*b*) by Federal grants for agricultural research, from which benefits have arisen for home education, especially through the scientific study of nutrition; (*c*) by the work of the United States Department of Agriculture in nutrition investigations; (*d*) by the services of the United States Bureau of Education, particularly in the newly organized Division of Home Education; and now (*e*) by the adoption of the Smith-Lever bill, which provides liberal Federal aid to State systems of extension teaching of agriculture and home economics (1914). Other legislation directly involving education for the home is now pending in Congress (pp. 179, 181).

The States and education for the home.—Education for the home will primarily turn on the provision made for it in the school laws of the various States. There is, therefore, presented in this chapter a statement of State legislation in relation to education for the home.

Section 1. GENERAL TENDENCIES IN STATE LEGISLATION AS TO EDUCATION FOR THE HOME.

(The following discussion is based on the data presented in Sections 2 and 5.)

Authorization and requirement of education for the home in public schools.—Education for the home is specifically authorized as a subject of instruction in the schools of approximately three-fourths of the States. All of the New England States; all of the Middle States except Delaware; all of the Southern States except West Virginia, Georgia, Florida, and Alabama; all of the Central States except Missouri and South Dakota; and all of the Mountain and

Pacific States except Wyoming and Colorado have in one way or another authorized the teaching of household subjects in their elementary school or high school, or in both. Thirty States have authorized the teaching in elementary schools, and 33 States in secondary schools. (Table 1, p. 42.) Formal recognition by the State government of household arts as a suitable subject of instruction has therefore taken place very generally throughout the whole country save in a block of adjoining Southern States, a similar block of Mountain States, and a few other scattering Commonwealths.

Sometimes the authorization is in terms of manual training; sometimes one or more household subjects are specifically mentioned in the list of statutory subjects to be taught in the public schools; and sometimes local school authorities are authorized by statute to levy necessary taxes, as for manual training, including domestic science, or for household arts. In the absence of such declaration, State approval may be assumed from legislation offering State financial aid in the introduction of home economics.

The enabling legislation may make provision for its own effective administration, as in the New Mexico statute of 1912, which not only authorizes the instruction, but provides for a course of study and a special assistant to the State superintendent to encourage industrial education. The present vocational education movement, as well as the manual training movement, is reflected in the permissive legislation regarding elementary and high schools, but appears more distinctly in the legislative provision for teaching household subjects in the industrial and vocational schools of 23 States. (Table 1, p. 42.)

The progress of agricultural education is one of the most striking features of this vocational movement, and preparation for rural homemaking is almost uniformly a feature of the programs of agricultural education. Up to the present 22 States have authorized the teaching of household arts in the rural public schools. (Table 1, p. 42.) This educational union of agriculture and home economics is especially illustrated in the laws establishing special secondary schools of agriculture, such as the Wisconsin county "schools of agriculture and domestic economy," the district agricultural schools of Alabama, Georgia, Oklahoma, and Virginia, the State agricultural schools of New York and Vermont, the "rural high schools" of Idaho, and the vocational "schools of agriculture, mechanic arts, and homemaking" of New York. Almost invariably the statutory provision for special schools of agriculture requires that instruction in domestic science shall be provided for girls.

In addition to the legal provision for domestic science in schools of certain types, it is significant that four States at least (Table 1, p. 42)—Oklahoma, Louisiana, Indiana, and Iowa—have made an outright requirement of the teaching of domestic science in the public schools, and a fifth, Massachusetts, requires (1904) manual training in the elementary and high schools of cities of over 20,000 population. Oklahoma in its constitution, adopted in 1907, charges the legislature "to provide for the teaching of the elements of agriculture, horticulture, stock feeding, and domestic science in the common schools of the State"; Louisiana, in 1910, provided by law that "instruction shall be given in all elementary and secondary schools in the principles of agriculture or horticulture and in home and farm economy"; and Indiana and Iowa took similar action in 1913. Washington requires either domestic science, manual training, or agriculture in its eighth-grade examinations; so that household-arts teaching is practically compulsory in the elementary school.

Such a legislative fiat does not create the trained teachers, revised courses of study, and other necessary conditions of the new education, but it does give expression to public conviction and it raises up new educational standards for a whole State, to which individual communities are seeking as rapidly as possible to attain. Such permissive and mandatory legislation, while not yet carried into effect, is by no means to be classed with the ordinary dead legal letter. It states the normal requirement to be expected of communities; it encourages petitions for such instruction by local voluntary organizations to local school boards, and it spurs hesitant school officials into action. One favoring item in the forward movement for agricultural education has been the readiness of legislatures to authorize, if not require, this teaching. Home economics has largely enjoyed the same advantage; and, clearly, every Commonwealth ought now not only to clear the way for such teaching from all impediments (for the absence of statutory permission may be an obstacle in securing local action), but ought to take positive measures to expedite teaching for homemaking. This encouragement of household arts in education may take the form of direct mandate that the subject shall be taught, or, as has so often been done in securing desirable readjustments in local school systems, the State may offer a financial grant toward the expense of the innovation. State aid for manual training and the more recent State aid for vocational education have both directly facilitated the local introduction of household-arts instruction. There is something inherently attractive about an undertaking in which some one else pays one-third, one-half, or two-thirds the expense, and the proposal to do something that you would like to do anyway becomes irresistible under such circumstances.

State aid for education for the home.—State aid to the local school unit toward the cost of domestic science may be classified, first, as regards the grade of school receiving aid. In 11 States—Iowa, Louisiana, Maine, Minnesota, Montana, Nebraska, New Jersey, North

Dakota, Rhode Island, Vermont, and Wisconsin—the State grants aid, directly or indirectly, to elementary schools (Table 1, p. 42); in 29 States aid is given for domestic science in secondary schools. This aid may be open to any secondary school upon certain conditions, or it may be limited to a certain group of secondary schools. (Table 1, p. 42.) In certain States special State appropriations have been made for domestic science in normal schools, as illustrated by California's establishment of a "State Normal School of Manual Training and Home Economics" in 1909; the special aid to the Texas normal schools since 1909; the Maine statute of 1911, which provides for household-arts departments in all normal schools, and a more advanced department for training of special teachers of home economics in one normal school; the Arizona provision of the same aid to normal schools as to high schools, in introducing domestic science; and the special provision for domestic science in certain normal schools, as in Wisconsin. These facts indicate that the subject of training teachers of home science in the State normal schools has been a matter of special legislative consideration in a number of States. Similarly there has been legislative action regarding higher education in home economics in State universities and colleges, and regarding extension education in homemaking in several of the States, but as regards normal schools and colleges alike there seems little need for a detailed review of legislation by different States, since both types of institutions are usually directed in their development by administrative boards rather than by the legislature. The facts of the present status of normal schools and higher institutions as to education for the home are presented elsewhere.

It is of interest to consider further, however, the basis of State aid to elementary and secondary public schools.

The aid for household arts in elementary schools may be classified as to method as follows: (*a*) A direct money grant, definite in amount, conditioned on the introduction of household arts, is the simplest administrative device. North Dakota gives $150 to first-class graded schools providing two years of high school and meeting certain other conditions, including courses in manual training, domestic science, and elementary agriculture, and $100 to second-class graded schools which have two teachers and give courses in manual training, domestic science, and agriculture, while first and second class rural schools receive $100 and $50, respectively, if they teach agriculture. Wisconsin grants $350 to schools which introduce domestic science in the sixth, seventh, and eighth grades and the high school, and $250 for work done in the high school alone. Similar provision is made for other departments of manual training, with the limitation that aid shall not be given to one school for more than three departments. Louisiana has made an appropriation of $50,000 a year for departments of agriculture and domestic science in schools. (*b*) A direct money grant, proportioned in amount to the local expense, is a slightly different and decidedly more efficient form of State aid. Maine grants two-thirds the expense of salary for domestic science and manual training up to $800 for elementary schools and $500 for high schools; New Jersey duplicates the local contribution, i. e., bears one-half, up to a maximum of $5,000, for both high and elementary schools in a district; and Rhode Island meets one-half the expenditure for "vocational" instruction, including the elementary school in its provisions. (c) A third method of State aid to elementary instruction in domestic science is by grants toward the cost of supervising household-arts teaching. Maryland grants $1,500 toward the support of county industrial schools for colored children, one-half to be used for the school itself and one-half for supervision of industrial instruction in the colored schools of the county; several of the States encourage the appointment of county organizers of industrial work. (*d*) A fourth method of giving financial aid for household arts in elementary schools is the Minnesota system (1909) of rural associated schools and central schools. A grant of two-thirds the cost, up to $2,500, is given to each of 30 high, graded, or consolidated schools to maintain courses of agriculture, manual training, and home economics; in addition, $150 to the central school for each associated rural school into which it extends the teaching of these subjects, and $50 to each rural school so associated. State aid and additional authority are thus bestowed upon the central school, which in turn will seek to extend its industrial work to surrounding districts, and these districts also receive grants to help meet the expense of the new instruction. North Dakota in 1912 adopted this associated-school plan of State aid for vocational education, including household arts. This Minnesota plan, it is to be observed, is not that of school consolidation (Minnesota uses that method, too); school districts retain their individual existence. State aid granted for the consolidation of schools, a matter apart from this discussion, has a bearing here, however, as the consolidation of schools is among the strongest influences making for the country-wide adoption of home economics into the schools, and State aid in consolidation has been made contingent upon manual training, including home economics, as in Minnesota.

State grants in aid of home economics in secondary schools, usually in connection with other manual training and vocational subjects, may be either (*a*) the definite money grant, as the $250 Wisconsin grant, the Maryland grant of $400 for a teacher, the Minnesota grant of $1,000 for courses in agriculture and in either home economics or in manual training in high or graded schools, and the North Dakota grant of $2,500 to high, graded, and consolidated schools, to five schools the first year and to not more than five additional each succeeding two years; or (*b*) the more common graduated grant, as in Arizona, one-half up to $2,500; in Maine, two-thirds up to $500; in Minnesota, two-thirds up to $2,500; in New Jersey, one-half up to $5,000 for a district, and for a vocational school up to $10,000; Rhode Island, one-half the amount expended for teaching and apparatus; and Texas, duplicating from $500 to $1,000 provided locally for a department of domestic science. (*c*) The granting of aid to a restricted group of secondary schools may be separately considered. Alabama has established State-supported agricultural departments in nine high schools and "a system of domestic science" by statute shares in the State appropriation. In the 10 similar agricultural high schools of Virginia, the 11 district agricultural high schools of Georgia, the 4 district agricultural schools of Arkansas, and the congressional district agricultural schools of Oklahoma—all supported by State appropriations—there are departments of home economics. Wisconsin has had since 1901 a well-known system of county schools of agriculture and domestic economy, 7 of which have been established, receiving State aid from $6,000 to $8,000, dependent upon the attendance; Michigan has a similar plan (1907), with State aid on a two-thirds basis up to $4,000; and Minnesota adopted, in 1905, a similar plan for county schools of agriculture and domestic science, though no schools have been organized under this law. North Carolina's law authorizing "farm-life schools" (1911) for each county is similar in scope. Analogous, if not identical, are the provisions for county high schools in Tennessee—aid to a maximum of one-third the amount received from other sources (1909), since (1913) increased by duplicating expenditures for agriculture, home economics, and manual training; the provision for county agricultural high schools in Mississippi with State aid up to a maximum of $1,500 to a county; the aid given in Iowa and Kansas to a special group of high schools, "the normal-training high schools," which are to prepare teachers of rural schools, conditioned upon the adoption of a curriculum which includes elementary agriculture and domestic science. These two subjects, it is obvious, are absolutely essential in the new rural school. Other States with normal-training high schools or normal-training classes in high schools have a most important suggestion here. (*d*) Indefinite grants are made in the South Carolina law (1907) for State aid to high schools by the provision of possible additional aid for commercial and industrial subjects, and the Louisiana appropriation of $50,000 (1912) for agriculture and domestic science in the public schools; but by action of State boards of education these grants have been made definite in amount.

The relation of the new plans for State aid in distinctly vocational education for the home merits separate consideration. The New Jersey industrial education act dates from 1881, with various recent amendments, and provides for State duplication within limits of money raised locally for industrial schools. The Massachusetts vocational education law of 1906, as amended, provides for the organization of independent industrial, agricultural, or household-arts schools, with day classes and continuation classes for persons over 15 and evening classes for persons over 17, including the new evening classes in household arts (law of 1912), and for all these State supervision and State aid equal to one-half the net maintenance cost; also agricultural departments in high-schools, with aid of two-thirds the salary expense. The New York law of 1908 provides aid to general industrial and trade schools, and the amendments of 1911 and 1913 to "schools of agriculture, mechanic arts, and homemaking," which may be organized as separate "schools" within high schools; aid of two-thirds the salary of the first vocational teacher and one-third that of additional teachers is given, and a State supervisor of industrial education provided. Maine has provided aid for general industrial schools (1911); Connecticut, in 1909, established two State trade schools, and in 1913 a general plan of vocational education was adopted; Michigan, in 1911, authorized vocational schools; Ohio, in 1910, authorized local boards of education to establish part-time day schools for youths between 14 and 16 in employment and to require their attendance not to exceed eight hours a week; Wisconsin, in 1911, provided for a system of industrial education, including industrial, continuation, evening, and commercial schools, with State aid of one-half the expense; Pennsylvania, in 1911, authorized local school directors to establish vocational schools, and in 1913 adopted a comprehensive plan for vocational schools; Indiana in the same year adopted a vocational education law.

These legal provisions for education of a strictly vocational nature may be relevant to an education for the home at any one or more of the following points: (1) The household trades of cooking, cleaning, laundering, service, may be included in their curricula, although, so far, much less has been done with them than with the former household trades of sewing and millinery; the laws generally give a basis, however, for full curricula for professional homemaking or the home trades; (2) there is a tendency to include something of home arts in vocational courses for girls preparing for business and industry, i. e., the double vocational future of the average woman is recognized, first, outside industry and later homemaking; (3) this tendency to recognize homemaking appears in provisions made for girls' continuation education: for example, specifically in the Massachusetts law for evening practical arts classes which have been organized as evening household arts classes for young women over 17 who wish to equip themselves for homemaking—a provision since adopted by several other States.

It is important to note that a law simply providing continuation instruction in the vocation or industry followed may not, in the case of industrial young women, meet this vital need of preparation for homemaking; what is necessary for them is not only further skill in the industrial vocation they are now following, but acquaintance with the homemaking arts, their vocation of to-morrow. Such plans as the Ohio part-time day schools, the Wisconsin and other continuation schools, should be so administered as to meet this double vocational need of girls and young women.

Fifteen States—California, Colorado, Florida, Illinois, Indiana, Maine, Massachusetts, Minnesota, Nebraska, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, and Wisconsin—report definitely in response to an inquiry addressed to their State superintendents that "continuation instruction in household arts is authorized in evening schools or otherwise for home women and for working girls," and such instruction is found in many other States. (Table 1, p. 42.) Replies to a similar inquiry as to whether "vocational instruction for cooks, dressmakers, milliners, children's nurses, and in other household fields is authorized in the industrial schools of the State," were in certain cases ambiguous, but such authorization for teaching housework as a trade exists in the following States at least: Connecticut, Indiana, Maine, Massachusetts, New Jersey, Michigan, New York, Pennsylvania, and Wisconsin.

Section 2. THE LAWS OF THE STATES ON EDUCATION FOR THE HOME, BY STATES.

Alabama.—Part of the appropriation for the district agricultural high schools is, by law, to be used for "a system of domestic science."

Arizona.—The Territorial legislature in 1905 authorized instruction in manual training and domestic science in public schools with 200 or more pupils, to be given by special teachers, supported by special tax, and to follow approved courses of study.

The School Code of 1913, chapter 23 (originally adopted, 1912), provides: "That in all school districts instruction may be given in manual training, domestic science, and kindergarten; provided that such subjects can be pursued without excluding or neglecting the subjects previously provided by law." Courses of study are to be prescribed by the local board of trustees subject to State approval; and boards of supervisors are authorized to levy additional tax for salaries and materials; no tuition is to be charged bona fide residents.

Chapter 13, paragraph 2791, School Law, 1913 (originally adopted, 1912) provides that "Any high school having satisfactory rooms and equipment, and having shown itself fitted by location and otherwise to give elementary instruction in agriculture, mining, manual training, domestic science, or other vocational pursuits, may upon application to the State board of education be designated to maintain such departments"; each such high school shall employ trained instructors whose qualifications shall be fixed by the State board, shall provide suitable classrooms and laboratories, and may provide a tract of land for field work; instruction is to be free to residents; State aid will be given, to be used for salaries and equipment only, not to exceed $2,500 per annum and one-half the total sum expended per school; normal schools are entitled to participate in this aid on identical terms.

California.—Article X, section 1665, of the school laws, in defining the "statutory school studies," includes "nature study with special reference to agriculture," "and when competent teachers thereof can be secured and there are sufficient funds in the district to pay their salaries, manual training and domestic science."

The joint board of State normal schools is directed to make for the normal schools "a uniform course of study which will include manual training, domestic science, agriculture, physiology and hygiene, and the methods of distinguishing physical defects."

In 1909 the State took over a special normal school established some years previously, "the Santa Barbara State Normal School of Manual Arts and Home Economics," intended for fitting both sexes "to teach in the public schools of this State and in the departments of manual arts and home economics."

Connecticut.—The school law (sec. 40) provides that in the public schools "shall be taught reading, spelling, * * * and such other studies, including elementary science and training in manual arts, as may be prescribed by the board of school visitors or town school committee."

Chapter 85, 1909, directs the State board of education to establish two trade schools and to provide in them at State expense and under State management, day, part-time, and evening classes.

Chapter 212, 1913, provides that "the State board of education, town school committees, and district boards of education may jointly or severally establish and maintain schools or courses of instruction in distinct trades, useful occupations, and avocations. Such courses may be organized into day or evening, continuation, or part-time classes." Advisory committees may be appointed. Approved schools may be granted State aid to the extent of "one-half the gross expenses of maintenance less returns from sales of product, not to exceed annually in any case $50 per pupil in average attendance, and not to exceed the amount expended for such net cost of maintenance by the district boards or school committees." Buildings and equipment must be furnished by the local authorities, except that the State may rent during a preliminary two-year demonstration. An appropriation of $125,000 is available for the first year.

Colorado.—In 1911 the State accepted from the National Government the property of the Fort Lewis Indian School and established the Agricultural School at Fort Lewis, "a school of agriculture, mechanic arts, and household arts," under the State board of agriculture.

Idaho.—Article I, section 6, of the school law of 1911, includes among the duties and powers of the State board of education "to encourage and promote agricultural education, manual training, domestic science, and such other vocational and practical education as the needs of this State may from time to time require."

In the law providing for the establishment of rural high schools (section 137, law of 1911), the trustees are empowered: "(*f*) To provide a course of study which shall be approved by the State board of education, shall consist of not more that four years beyond the elementary school, and shall include manual training, domestic science, nature study, and the elements of agriculture."

Illinois.—In 1909 a bill was passed authorizing a referendum to establish manual-training departments in the township high schools.

Indiana.—A law in 1903 authorized, in cities of 50,000 to 100,000, the introduction of industrial or manual training and of domestic science. School boards in cities of 100,000 or more have power to levy 5 cents per $100 as a manual-training fund for manual training or vocational schools or for instruction in schools or high schools. Trade and industrial schools may be established in cities of 200,000 population or over, and a tax of 3 cents per $100 for this purpose may be levied.

"The several boards of county school commissioners are hereby authorized (ch. 386, 1910) to make manual training, domestic science, and agriculture a part of the course of instruction."

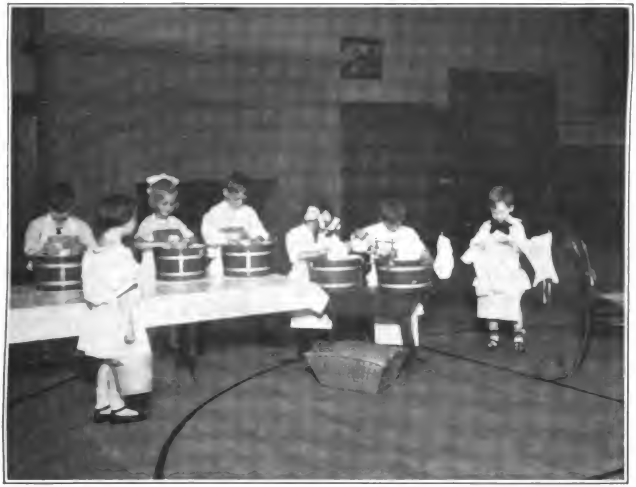
The vocational education law of 1913 requires "vocational" subjects to be taught in the grades, including "domestic science in the grades of all city, town, and township schools"; the State board of education "shall also outline a course of study in agriculture, domestic science, and industrial work, which they may require city, town, and township high schools to offer as regular courses"; the law, in addition to authorizing "instruction in elementary domestic science, industrial and agricultural subjects as a part of the regular course of instruction," makes provision for a State-aided system of "industrial, agricultural, or domestic science schools or departments." The law gives definitions of vocational education, industrial education, agricultural education, evening class, part-time class, and of domestic-science education, the latter as "that form of vocational education which fits for occupations connected with the home"; and evening classes in domestic science are to be "open to all women over 17 who are employed in any capacity during the day." The "approved industrial, agricultural, or domestic science school or department shall mean an organization under a separate director or head of courses, pupils and teachers approved by the State board of education." Any city, town, or township school trustees may establish such special schools or departments, and may levy a special tax not to exceed 10 cents on $100. Two or more such communities may join in establishing a cooperative school; and residents of communities in which there are no such schools may apply for admission in the school of another city, town, or township, subject to approval by the State board of education and the payment of a fee, fixed by the State board, by the city, town, or township of residence; one-half the fee so paid will be reimbursed by the State. Local expenditures for approved vocational schools and departments are reimbursed by the State to an amount equal to two-thirds the sum, beginning with the school year of 1914–15.

The State board is directed to aid in the introduction of vocational education and to supervise and approve such schools and departments; and the board is reorganized by the law to include in its membership "three persons actively interested in and of known sympathy with vocational education, one of whom shall be a representative of employees and one of employers." A deputy State superintendent of public instruction is to be appointed "in charge of industrial and domestic education."

Local boards of education shall appoint "an advisory committee composed of members representing local trades, industries, and occupations." Local boards, after establishing vocational schools, are authorized to prescribe compulsory attendance five hours per week, between 8 and 5 o'clock, of youths between 14 and 16 in employment.

A special State levy of 1 cent on each $100 of taxable property is to be made for vocational education, and the balance at the close of any fiscal year is to be placed in a "permanent fund for vocational education."

The law provides that a county agricultural agent may be appointed in each county, who shall, under the supervision of Purdue University, "cooperate with



A. DOLL'S WASH DAY IN THE KINDERGARTEN, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK, N. Y.

B. COOKING LABORATORY IN ELEMENTARY SCHOOL, NEW YORK, N. Y.

farmers' institutes, farmers' clubs, and other organizations, conduct practical farm demonstrations, boys' and girls' clubs and contest work, and other movements for the advancement of agriculture and country life, and to give advice to farmers on practical farm problems, and aid the county superintendent of schools and the teachers in giving practical education in agriculture and domestic science." An initial $500 for expenses must be raised by subscription; thereupon the county council must appropriate $1,500 annually for salary and expense, and the State will grant one-half the salary up to $1,000, making the grant through Purdue University, which is to select and direct the county agents.

Iowa.—The school law (sec. 2786) authorizes "industrial expositions," by the board of any school corporation, of pupils' work "in mechanics, manufacture, art, science, agriculture, and the kitchen" as often as once a term and not oftener than once a month.

The State normal-training high-school law (1911, as amended 1913) "for the purpose of increasing facilities for training teachers for rural schools by requiring a review of the common branches, and for instruction in elementary pedagogy and the art of teaching elementary agriculture and home economics," provides $750 aid to high schools designated to conduct training classes which have at least a minimum of 10 members. County high schools or township high schools are to have preference over city high schools; the original appropriation of $25,000 was raised to $100,000 for 1913–14 and $125,000 thereafter. The course of study provides for one-half year of home economics, including in each week's program two recitation periods of 45 minutes, two laboratory periods of 90 minutes, and one sewing period of 45 minutes.

By an act approved May, 1913, State aid is granted to consolidated schools of two or more rooms which provide in their course of study for industrial and vocational subjects, including home economics, to be taught by teachers certificated to teach such subjects: For the two-room school, $250 for equipment and $200 annually; for the three-room school, $350 for equipment and $500 annually; for the school of four or more rooms, $500 for equipment and $750 annually. Thirty thousand dollars is appropriated for 1913–14 and $50,000 annually thereafter.

By an act approved March 29, 1913, "The teaching of elementary agriculture, domestic science, and manual training shall after July 1, 1915, be required in the public schools of the State." The State superintendent is to prescribe the extent of instruction, and after that date elementary agriculture and domestic science are to be included in the examination of teachers required to teach these subjects.

Kansas.—By an act of 1903, inoperative since the lapsing of the appropriation made that year, the board of education of each city of the first class and second class and the annual school meeting of any school district may levy a special tax not to exceed one-half mill (now one-eighth) in cities of the first and second class and not to exceed 1 mill in other cities and school districts for the equipment and maintenance of industrial training schools or industrial training departments of the public schools.

Either a separate school or a separate department in some existing school may be arranged. A course of study to meet the special needs of the district or city is to be prescribed by the local board, subject to approval by the State board of education. The State board shall establish a standard for teachers of industrial training, shall grant special teachers' certificates, and shall prescribe the course of study in industrial training to be used in the State.

For industrial schools or departments maintained six months in the preceding year and taught by special teachers a State grant is made equal to the expense of the school or department, but not exceeding $250 for a school district and not exceeding $10,000 in any one year. The appropriation of $20.000 in 1903 has not been renewed, and the above provisions are therefore inoperative.

In 1911 State aid of $250 ($500 beginning with 1914) per year was provided high schools which (1) maintain a normal training course or shall put into operation such course, and (2) which maintain courses in the elements of agriculture and domestic science as approved by the State board of education, with at least 10 pupils in these industrial courses. An appropriation of $25,000 was made for 1912–13; increased to $50,000 for 1914–15.

Kentucky.—A law was passed in 1908 providing for instruction in manual training, domestic science, and elementary agriculture in county high schools, the course to be approved by the State board of education.

The county high school law, 1912, which provides for the establishment of one or more county high schools, grades these schools and provides that in schools of the first class, which are to maintain a four-year course of study, "such course may provide for instruction in manual training, domestic science, and elementary agriculture."

Louisiana.—By act 306, 1910, "in addition to the branches now given in the public schools of the State of Louisiana, instruction shall also be given in all the elementary and secondary schools of the State in the principles of agriculture or horticulture and in home and farm economy."

In 1910, $25,000 was appropriated "to be used in establishing agricultural departments in the secondary schools of the State," but no provision for home economics was made except that each school farm should have a "home canning plant."

By act 186, 1912, the sum of $50,000 for the years ending June 30, 1913 and 1914, was appropriated to be used "for aid and support of the departments of agriculture and domestic science in the public schools of Louisiana."

Maine.—Chapter 188, 1911, "An act for the encouragement of industrial education," provides:

SECTION 1. The State superintendent of public schools is charged with the supervision of such instruction.

SEC. 2. The trustees of the State normal schools shall cause to be introduced such courses in manual arts, domestic science, and agriculture as will enable their graduates to teach elementary courses in those subjects in the rural and grade schools. In not more than one of said schools the course in manual training shall be so extended as to offer opportunity to persons desiring to qualify as special teachers of that branch, and in not more than one the course in domestic science shall be so extended as to offer similar opportunity to persons desiring to qualify as special teachers thereof. For the two special courses thus offered the trustees are authorized to expend annually not to exceed $4,000 (since made $6,000), which shall be additional to other sums appropriated for the support of said normal schools and which the treasurer of State shall deduct from any funds raised for the support of common schools.

SEC. 3. For approved manual training or domestic science in the elementary schools of any town for the preceding year "State aid shall be paid to the amount of two-thirds the total salary paid each teacher: *Provided*, That the amount so paid by the State for the employment of any one instructor shall not exceed $800 in one year," "*And provided further*, That the course of study, equipment, and qualifications of instructors shall have been approved by the State superintendent of public schools."

SEC. 4. For instruction in the principles of agriculture, mechanic arts, or domestic science given in any free high school, or incorporated academy, there shall be paid "in addition to other State aid, if any, a sum equal to two-thirds the total expenditure for instruction in each of said courses: *Provided, however,* That no school shall receive a total in excess of $500 in any one year for the support of said courses: *And provided,* That State aid shall not be allowed for any course which has an average attendance of less than 12 students: *And provided further,* That such aid shall not be granted unless the course of study, equipment, and qualifications of instructors shall first have been approved by the State superintendent of public schools."

Sec. 6. For an evening school the "town shall be reimbursed by the State a sum equal to two-thirds the amount paid for instruction, provided there shall have been offered, in addition to the subjects elsewhere prescribed for evening schools, courses in free-hand or mechanical drawing, domestic science or manual training, or the elements of the trades."

Sec. 7. "The superintending school committee of any town, when authorized by vote of the town, shall establish and maintain as a part of the public-school system of such town a general industrial school for the teaching of agriculture, household science, the mechanic arts, and the trades." Such general industrial schools shall be open to pupils who have completed the elementary-school course or who have attained the age of 15 years." "For such a school maintained therein for a period of 36 weeks during the school year and employing at least one teacher, whose work is devoted exclusively to such instruction, and having an average attendance of at least 20 pupils," a sum equal to two-thirds the total amount spent for instruction (but not more than $2,000 to any one town) shall be paid by the State.

Sec. 8. Appropriates $27,500 (since made $40,000) for industrial education.

Maryland.—Chapter 589, 1904: "In every district school there shall be taught orthography, etc. * * * Vocal music, drawing, physiology, laws of health and domestic economy, civil government, and the elements of agricultural science may, in the discretion of the State board of education, be added to the branches taught in the State normal school and in the public schools of the various counties of the State."

Chapter 386, 1910, provides for State aid to high schools, which are classified into two groups: Class one is to provide for manual training and domestic science courses and also for commercial or agricultural courses; class two is to provide manual training (including domestic science) or agriculture or commercial courses.

State aid is given as follows: Group I, $600 for principal and $300 to each of first three high-school assistants, $400 for each of two special teachers, and $100 for each additional regular grade teacher, provided the total amount does not exceed $2,500; Group II, $600 for principal, $400 for one assistant teacher for regular high-school work, and $400 for an instructor of the special subject.

According to chapter 10, 1910, colored industrial schools may be established by the county school commissioner, where instruction shall be given daily in domestic science and such other industrial arts as may be outlined by the county school board. The State will allow $1,500 to each county so organizing, one-half for the industrial school and one-half for the supervision of colored schools, so as to make industrial instruction a daily part of every colored school in the county.

Massachusetts.—By the law of 1904 every city and town containing 20,000 inhabitants or more shall maintain the teaching of manual training as part of its elementary and high school system.

"Manual training, agriculture, sewing, cooking, civil government, ethics, thrift," etc., may be taught in the public schools. (Rev. law, ch. 42.)

"Instruction may be given in the public schools in the application of surgical remedies in cases of emergency and the principles of first aid for the injured." (Ch. 247, 1911.)

The Massachusetts system of vocational schools, established in 1906, as outlined in the amended law of 1911, treats of household-arts education so far as it is a division of vocational education, "the controlling purpose of which is to fit for profitable employment." Household-arts education is defined as "that form of vocational education which fits for occupations connected with the household." The legislation concerns only the "independent, industrial, agricultural, or household arts school," the "evening class," and "part-time continuation class" of such a school. The independent school "shall mean an organization of courses, pupils, and teachers under a distinctive management, approved by the board of education, designed to give either industrial, agricultural, or household arts education as herein defined." The "distinctive management" required is relaxed only in case of the independent agricultural school which is specially defined so as to include "a separate agricultural department offering in a high school as elective work, training in the principles and practice of agriculture to an extent and of a character approved by the board of education as vocational." "The Commonwealth, in order to aid in the maintenance of approved local or district independent industrial or household arts schools and of independent agricultural schools consisting of other than agricultural departments in high schools, shall, as provided in this act, pay annually from the treasury to cities and towns maintaining such schools an amount equal to one-half the sum, to be known as the net maintenance sum." "Cities and towns maintaining approved local or district independent agricultural schools, consisting only of agricultural departments in high schools, shall be reimbursed by the Commonwealth, as provided in this act, only to the extent of two-thirds of the salary paid to the instructors in such agricultural departments."

Chapter 106, 1912, provides that "any city or town may, through its school committee or other board of trustees for vocational education, establish and maintain separate evening classes in household and other practical arts. Such classes shall be known as practical-art classes, shall be open to all women over 17 years of age who are employed in any capacity during the day, and may be established and maintained as approved State-aided practical-art classes," under the provision of the 1911 act for aiding vocational schools. A special State supervisor of such classes was appointed in 1912. These evening classes for women are open to home women or to those employed during the day outside the home.

By chapter 174, 1914, any city, town, or district composed of cities and towns may, with the approval of the State board of education, "establish classes for the training of teachers for continuation and vocational schools"; and chapter 319 authorizes the State board of education to establish such classes.

Michigan.—A law of 1901 provides that township rural high schools may provide a course of study, approved by the superintendent of public education and by the president of the State agriculture college, of not more than four years in length, which may include manual training, domestic science, nature study, and elements of agriculture.

Act 35, 1907, provided for the establishment of county schools of agriculture, manual training, and domestic economy to teach agriculture, including soil, plant life, and animal life of the farm, etc. "Instruction shall also be given in manual training and domestic economy and such other related subjects as may be prescribed." In 1909 the act of 1907 was amended by providing State aid equal to two-thirds the amount expended for maintenance, with a maximum to each school of $4,000; the superintendent of such schools is to be a graduate of the State agricultural college; the State superintendent shall establish requirements and, with the advice of the president of the agricultural college, shall determine the qualification of teachers; he shall also have general supervision, shall inspect, and make recommendations as to management. Act 29, 1911, amends the law regarding county schools of agriculture by authorizing the superintendent to approve two such schools in a year instead of only one. Act 12, 1913, provides that any county which will expend $20,000 in buildings and equipment and which has title to 80 acres of land for the purpose may establish a county school and receive State aid on a two-thirds basis up to $4,000. Act 361, 1913, requires boards of supervisors to submit to electors the question of establishing a county school of agriculture, manual training, and domestic economy, upon petition of at least 10 per cent of the electors. Act 22, 1911, empowers school districts to establish and maintain trade, vocational, industrial, marine, and manual training schools, school gymnasiums and scholarships, and to accept gifts, legacies, and devises.

Minnesota.—County schools of agriculture and domestic science are authorized to be established by the county commissioners on vote of the electors, with State aid to not more than two schools, but no schools have been organized under the law. (Ch. 314, 1905.)

The Putnam Act of 1909, amended in 1911 and 1913, provides State aid not exceeding $2,500 for departments of agriculture, manual training, and domestic economy in approved high schools, graded schools, and consolidated rural schools; and authorizes rural schools to become associated with such schools for such teaching; aid of $50 is given to each rural school, and $150 to the high, graded, or consolidated school so associated; the 1913 amendment adds $150 for such rural schools in the same district with the high, graded, or consolidated school as the State high-school board shall designate; with a maximum to any high, graded, or rural consolidated school of two-thirds the sum expended for the agricultural and industrial department. Rural schools may also become associated with a high or graded school in which is maintained such a department, whether or not the high or graded school has been designated to receive aid. The principal of the high or graded school, to be known as the central school, is to prepare a suitable course of study for the rural schools, embodying instruction in agriculture and industrial training.

In 1911, amended in 1913, Minnesota adopted another plan (Benson-Lee Act) for giving aid for high-school and graded-school industrial courses as an alternative to the Putnam plan, as follows:

"Any high school or graded school maintaining such a course as the high-school board of this State shall prescribe in agriculture and *either* in home economics or in manual training shall receive annually, in addition to other aid, the sum of $1,800 for maintaining such industrial courses, to be paid from the appropriation made for State aid to high and graded schools."

The two acts are mutually exclusive; aid is given to a school under one or the other.

The consolidated school law of 1911 is intended to encourage, among other improvements, "industrial training, including the elements of agriculture, manual training, and home economics." Class A schools, of four or more rooms, receive $1,500 in State aid; B schools, of three departments, $1,000; C schools, of two departments, receive $750; 25 per cent of building cost up to $1,500 is allowed. At least one teacher in a consolidated school must be qualified to teach sewing and cookery, and the building must provide for manual training and home economics.

Mississippi.—Chapter 125, 1910, authorizes school districts to introduce music, drawing, and manual training into the grades upon the vote of the trustees.

Chapter 122, 1910, provides for the establishment of county agricultural high schools. "The county school board in each county may establish not more than two agricultural high schools, one for white youths exclusively and the other for colored youths exclusively, in which instruction may be given in high-school branches, theoretical and practical agriculture, domestic science, and in such other branches as the board may hereafter provide * * * subject to review and correction by the State board of education." The board of supervisors is to levy a proper tax; if two schools, a separate tax for each shall be levied and not over 2 mills for each; if, after the tax is levied, 20 per cent of the taxpayers petition that either or both taxes be not levied, then a vote shall be taken. At least 20 acres of land is to be provided for each school, and a dormitory for 40 students. Two adjacent counties may unite in establishing a school. After inspection by the State superintendent and approval by the State board of education, aid may be given of a maximum of $1,500 to one county, or $3,000 to the joint schools of the two counties.

Chapter 150, 1912, authorizes county supervisors to bond for agricultural high schools; and chapter 35, 1912, appropriates $60,000 for State aid to these county high schools.

Chapter 254, 1912, provides that when the number of boarding pupils exceeds 30 the State grant shall be $2,000, and when it exceeds 40 the grant shall be $2,500.

Montana.—Chapter 76, 1913, the new educational code, provides in section 1700 for industrial education as follows: "Elementary manual and industrial training, which shall include industrial art, may form a part of the required course of study in all grades of the public schools. The superintendent of public instruction shall formulate a course of study or he may approve courses of study formulated by local school officials which meet the requirements of this section School districts having a population of over 5,000 shall, and districts of less population may, maintain at least one manual training school * * * to furnish manual and industrial instruction to pupils who are above the fifth grade. Such schools shall furnish instruction in elementary wood, metal, and textile work; in mechanical and industrial drawing; and, in communities where applicable, in agriculture, mineralogy, and technical mining; and for girls above the first grade instruction in household management, decoration, and economics, and in needlework." In school districts of over 10,000 (permitted in smaller districts) there shall be maintained "schools of special courses in connection with manual training or city or county high schools, designed to furnish a direct vocational training, including training in agricultural pursuits or mining for which there shall be a local demand." Classes are to be formed when not less than 20 applicants desire instruction in any vocation. The local general school fund is to be charged for manual and industrial schools and courses, and the State is to grant $10 to each district for each person attending such manual and industrial courses for a period of six months or more; and a similar grant is provided for courses in county high schools. The manual training teacher's certificate and a special vocational teacher's certificate, respectively, must be held by teachers in the manual training and the vocational courses.

The act of March 11, 1913, provides that the county commissioners of any county may, upon petition of 51 per cent of qualified voters engaged in agricultural pursuits, appropriate $100 per month for part salary and expenses of a county agricultural instructor, to be named and directed by the Montana Agricultural Experiment Station. The remainder shall be paid from funds appropriated by the State or United States or from any other source.

Nebraska.—By the law of 1907, in county high schools there shall be taught and practiced in the ninth and tenth grades, manual training, domestic science, and the elements of agriculture; and in the eleventh and twelfth grades, normal training and the theory and practice of agriculture for the purpose of practice and teaching.

The agricultural high-school law of 1913 provides State aid, not exceeding $1,250 and not exceeding one-half the total expense, for an agricultural and industrial department with courses in agriculture, manual training, and home economics in approved accredited high schools, rural high schools, consolidated rural high schools, or county high schools. Rural district schools giving instruction in agriculture, manual training, and home economics, in association with one of these high schools, may receive State aid of $50. Thirty schools may receive aid during 1913–14. An inspector of agricultural training is to be appointed by the State superintendent.

Nevada.—The introduction of industrial training into the schools was authorized in 1909. By act of March 20, 1911, the State board of education is directed and empowered (ch. 1, sec. 4, par. 1) "to prescribe and cause to be enforced the courses of study for the public schools, such courses to contain in the seventh and eighth grades, among other things, business forms and elementary bookkeeping or some features of industrial work; and in the high-school grades, provision for full commercial work and industrial work suitable for boys and girls: *Provided*, That schools of the first class may have modified courses of study, subject to the approval of the State board of education."

New Hampshire.—There is no special legislation, but instruction in household arts is well developed; the State superintendent has issued a special report and noteworthy institute lessons.

New Jersey.—Article 22 of the school law of 1911 (codified) relating to manual training provides that "whenever a school district shall raise by tax or subscription or both not less than $250 for the establishment of a school or schools for industrial education or manual training, or for the purpose of adding industrial education or manual training to the course of study then pursued in the school or schools," the State will pay an equal amount; also for each year's maintenance a sum equal to that raised by the district, with a maximum of $5,000 to any district, provided the course of study is approved by the State board.

By the New Jersey laws regarding industrial schools (1906, 1907, 1909), any community raising at least $3,000 for the establishment of industrial schools will receive an equal contribution from the State, and the State will annually contribute a sum equal to that raised locally for maintenance, with a maximum of $7,000 per year. "A local board of trustees of schools for industrial education" is appointed by the governor. When such board acquires the sum of $100,000, the maximum State contribution becomes $10,000 a year. In cities of the second class the cost of such a school is limited to $50,000.

In the reorganization of the educational system, 1911, there was provided an assistant to the commissioner of education "to act as supervisor of industrial education, including agriculture."

Chapter 294, 1913, defines vocational education and its various divisions and directs the commissioner of education to aid in the establishment of vocational schools. Boards of education are authorized to establish industrial, agricultural, and household art schools, and two or more districts may join. State aid equal to that raised locally, exclusive of the cost of lands and buildings, will be given up to a maximum of $10,000 for any one school. "County vocational schools" may be established under a special board of education; support is to be given by tax levied by the county, with State aid equal to the local contribution, exclusive of costs of land and buildings; State aid is limited to $10,000 to any one school, and to $80,000 for the total State expenditure.

A law of 1908 established summer normal courses in agriculture, manual training, and domestic science, and these schools are continued by chapter 310, 1913.

New Mexico.—By the act of 1912 the State board of education is empowered to prescribe and adopt a course of study in industrial education, including domestic science, manual training, and agriculture, and may require its teaching in the public schools. In the preparation of institute manuals the State board of education may include a course of study in industrial education and may require all teachers attending county institutes and summer normal schools to pass an examination in one or more of the branches of industrial education. The State superintendent of public instruction is empowered to appoint a State director of industrial education, who will have in charge the introduction and teaching of industrial education.

The establishment of county high schools is also authorized (1912) in each county of the State having a population of 5,000 or more. The course of study provided for such schools is to include the additional branches of manual training, domestic science, elements of agriculture, and commercial science. This law was amended, 1913, so that any county, regardless of population, may now have one or more county high schools. Under this law 11 county high schools are in operation and others are soon to be voted upon.

New York.—New York State, in 1913, amended its industrial-education law (1908) providing for State-aided vocational instruction so as to include evening vocational schools and part-time or continuation schools as types of vocational instruction which might be State aided, increased the amount of State aid, and made the law more practicable for smaller communities.

State aid is provided for industrial schools, trade schools, schools of agriculture, mechanic arts, and homemaking, evening vocational schools, and part-time or continuation schools. When these schools have an enrollment of at least 15 pupils and maintain an organization, course of study, and are conducted in a manner approved by the commissioner of education, a sum equal to two-thirds of the salary of the first teacher is granted by the State. Additional apportionment is made to each school for each additional teacher employed exclusively in the schools mentioned to the amount of one-third of the salary paid to each additional teacher, but in no case does the State apportionment for each teacher exceed $1,000.

In the general industrial schools, courses in homemaking may be established as a part of the vocational work elected by the girls. Trade schools for girls may give most of their time to intensified trade training and comparatively little to homemaking and academic subjects. On the other hand, there may be established trade schools for girls which fit for the occupations concerned with the household.

The schools of agriculture located in the open country are expected to have homemaking departments with courses in cooking and sewing, millinery and home decorations.

The part-time or continuation schools provide for instruction in the trades and in industrial, agricultural, and homemaking subjects and are open to pupils who are over 14 years of age who are regularly and lawfully employed during a portion of the day in any useful employment or service, and these subjects shall be supplementary to the practical work carried on in such employment or service. In other words, it is possible to establish continuation schools for housekeepers and those engaged in household service, provided the subjects taught in the school are supplementary to the practical work carried on in the employment or service. In the case of evening vocationl schools, instructions may be given in homemaking subjects, and the law distinctly provides that instruction in homemaking for evening schools shall be open to all women over 16 years of age who are employed in any capacity during the day. This statement in the law makes it plain that evening vocational work for women is not necessarily limited to instruction in only those subjects which are related to the practical work carried on in the daily employment.

The word "school" as used in the law is intended to include any department or course of instruction established and maintained in the public school for any of the purposes specified in the law.

Academic credit toward the State high-school diploma is allowed in all homemaking subjects when taught by a special teacher of homemaking, when there are double laboratory periods, and when the work is satisfactorily done as judged by inspection from the State education department. Credit toward academic diploma may also be given in household arts or household chemistry when taught by a special teacher of homemaking subjects and when a definite syllabus relating to these subjects is approved by the division of vocational schools, State education department.

Suggestive courses in homemaking of high-school grade are issued by the education department, and they are based upon the following principle, that five-twelfths of the time of the student is to be given to vocational work and seven-twelfths to so-called liberal studies. Any girl successfully completing this course is then granted a standard high-school diploma.

The State schools of agriculture at St. Lawrence University, Canton; Alfred University, Alfred; and State School of Agriculture, Morrisville, are allowed by law to give courses for training teachers of agriculture, mechanic arts, and homemaking and receive the same State aid as is given to "schools of agriculture, mechanic arts, and homemaking."

North Carolina.—By the "county farm-life school law" of 1911 it is provided that "there shall be established and maintained in every county * * * a school to be known as a county farm-life school, for training and preparing the boys and girls of the county for farm life and homemaking." The establishment of the school is to be determined by an election, and if the county vote is negative a township or contiguous townships may establish. Bonds up to $25,000 are to be issued for buildings and equipment, which are to include a school building, a dormitory for 25 boys and 25 girls, a farm of 25 acres, a barn, etc. At least $2,500 is to be provided locally each year for maintenance, and State aid of $2,500 is given. As regards its girl students, the aim is to prepare "for homemaking and housekeeping on the farm." The course of study, which is subject to approval by the State superintendent and the advisory board on farm-life schools, is to include "practical work in all subjects related to housekeeping and homemaking by girls." The schools are to conduct extension work, including "township and district meetings in various parts of the county for farmers' wives," short courses for adult farmers, men and women, at the school, and one or more county meetings for farmers' wives with instruction and demonstration at the school; and also cooperation with the schools and short courses for teachers which would doubtless include home interests. The State superintendent has recently recommended the establishment of similar courses in all rural high schools.

North Dakota.—There were adopted, in 1911, three laws bearing upon education for the home.

Chapter 35, 1911, "An act to encourage elementary education," is intended "to aid, encourage, stimulate, and standardize the rural and smaller graded schools of this State." It gives State aid based on a classification as follows: State graded schools of the first class are those with four departments meeting certain conditions, including a regular and orderly course of study, "including two years of high school, as well as courses in domestic science, manual training, and elementary agriculture," and they receive $200; graded schools of the second class have two teachers and give courses in "domestic science, manual training, and agriculture," and receive $150; rural schools giving agriculture and meeting other conditions receive $150 or $100; if schools are consolidated, further aid is given.

Chapter 40, 1911, like the Minnesota central and associated school plan, "provides for the establishment and maintenance of a department of agriculture, manual training, and domestic economy in State high, graded, and consolidated schools." Five schools were to be aided the first year, each school receiving aid of $2,500, beginning 1912–13, and no more than five schools added every two years thereafter. Such a school shall employ trained instructors in agriculture, manual training, and domestic science (including cooking and sewing), and have a 10-acre demonstration tract. A plan is also provided "for extending manual training and domestic economy to rural schools," whereby one or more rural schools may become associated with any State high or graded school maintaining a department of agriculture (whether or not such school receives State aid). The proceeding is by vote of the district, as in consolidation, and then the central school and the associated schools shall be known as "the associated school of ——— for the teaching of agriculture and manual training." A special tax, to be not less than 1 mill nor more than 4 mills, is levied in various rural school districts. Each rural district school board designates one of its members to act with the school board of the central school in carrying out the provisions of this act.

The principal or superintendent of the central school shall have authority over associated rural schools and shall prepare for them "a suitable course of study, embodying training and instruction in agriculture and such subjects as are related to farm life and can be successfully taught in rural schools."

Chapter 265, 1911, provides for "the establishment of county agricultural and training schools and their joint maintenance by the State and county wherein located." The establishment is to be by petition, followed by a vote; there must be provided for the establishment not less than $10,000, nor more than $20,000; for yearly maintenance the county is to pay one-half and the State one-half, the total not to exceed $6,000 per year, and the State's share to be raised by a tax not exceeding one-fifth of 1 mill. A "State agricultural and training school board" is provided, composed of the president of the State agricultural college, State superintendent of instruction, and "three practical farmers appointed by the governor"; it shall prescribe the course of study for county agricultural and training schools, "to include, first, elements of agriculture, * * * manual training, and domestic economy; and, second, instruction in the common branches and such other branches as are necessary for the training of teachers in rural schools." Graduates are to receive certificates equivalent to second-grade teachers' certificates.

Ohio.—The school law provides that "any board of education may establish and maintain manual training, domestic science, and commercial departments; agricultural, industrial, vocational, and trade schools, also kindergartens, in connection with the public-school system, and pay the expenses of establishing and maintaining such schools from the public-school funds, as other school expenses are paid."

Section 7655—4 of the school law of 1914 defines a consolidated elementary school of the first grade and includes in the definition the following among the requirements: "(*j*) A course in domestic science. (*k*) Two teachers to be employed for 10 months each, one teaching agriculture, the other to teach domestic science during the school term and to supervise domestic science instruction during part of the vacation. (*l*) Agriculture and domestic science apparatus to the value of $100." Special State aid to the amount of $100 is paid each year to each such school.

Oklahoma.—Article 13, section 7, of the constitution, adopted September, 1907, declares that "the legislature shall provide for the teaching of the elements of agriculture, horticulture, stock feeding, and domestic science in the common schools of the State." By a legislative act of 1909, the "State commission of agriculture and industrial education" is established to carry out this provision of the constitution; county superintendents are to report annually on these branches; after 1909, no person is to teach in State-aided public schools who has not passed an examination in these branches, and teachers are to report in detail on progress in these subjects to county commissioners; normal schools are to give instruction "in agricultural and allied subjects" and to cooperate in establishing a State system of agricultural and industrial education in schools, and there is to be established in each school a "department of agricultural and industrial education"; the agricultural and mechanical college is to be "technical head of the agricultural, industrial, and allied science system of education," and, through a "professor of agriculture for schools," is to direct and advise. There is to be established in each supreme-court district a district agricultural school of secondary grade for instruction in agriculture, mechanics, and allied branches, domestic science, and economics. The courses are to lead to the agricultural and mechanical college and to the State normals. These schools are to be under the administration of the State commission of agriculture and industrial education; each agricultural school is to hold short courses of at least one week each year including a course in domestic economy, canning, preserving, and cooking.

Oregon.—It is provided (1907) that any union high school may establish a department of industrial training in connection with the school under its management; the expense is to be met the same as for other schools; the State board is to give information and assistance as far as possible.

The school law provides (sec. 274, 1911) that the high-school course of study must have two years of required work, uniform throughout the State, to be prescribed by the State superintendent, and that the optional work to be prescribed by the county high-school board or district-school board, after consultation with the State superintendent, may be all or in part industrial, and in this case the optional work may be extended through the four years' course.

Pennsylvania.—The school law of 1911 in article 4 authorizes any board of school directors to establish the following additional schools or departments for the education and recreation of persons in the district which shall be an integral part of the public-school district and shall be so administered; namely, high schools, manual training schools, vocational schools, domestic science schools, kindergartens, libraries, museums, * * * public lectures, together with such other schools or educational departments as they may see proper to establish.

Article 9 provides that the State board of education shall encourage agricultural education, manual training, domestic science, and such other vocational and practical education as the needs of the Commonwealth may require.

Article 10 directs the State superintendent to appoint one expert assistant in agricultural education, one in industrial education, and one in drawing.

Article 16 prescribes, for the elementary course of study, the common English branches together with such other branches, including drawing, physical training, elementary manual training, elementary domestic science, and elementary agriculture, as the board of school directors in any district may prescribe.

The vocation education law of 1913 (No. 92, 1913) defines vocational education as that "the controlling purpose of which is to fit for profitable employment." 'Industrial, agricultural, or household arts schools or department or vocational school or department shall mean a distinctive organization of courses, pupils, and teachers approved by the State board of education, designed to give either industrial, agricultural, or household arts education as herein defined." Household arts education is "that form of vocational education which fits for occupations connected with the household;" "household arts school or department shall mean a vocational school designed to develop, on a vocational basis, the capacity for household work, such as cooking, household service, and other occupations in the household;" "evening class in a household school or department shall mean a class giving training in homemaking to girls or women over 14 years of age, however they may be employed during the day." (Sec. 1.)

The State board of education is directed to investigate and to aid in the introduction of vocational education; to assist in establishing schools and departments and to inspect and approve them; the State superintendent is directed to appoint "expert assistants other than those already provided by law as may be necessary in industrial, household arts, or agricultural education." (Sec. 2.)

Any school district may through its board of school directors establish and maintain vocational schools and departments; two or more districts may join in so establishing and maintaining; "an advisory committee composed of members representing local trades, industries, and occupations" may be appointed. (Secs. 3, 4, 5, 6.) Nonresident pupils may be admitted, the district of residence to pay a tuition fee. (Sec. 7.)

For the support of approved vocational schools and departments the State shall pay annually an amount equal to two-thirds the sum which has been expended during the previous year "for instruction in practical subjects and in such related technical and academic subjects as may be necessary to complete well-rounded courses of training: *Provided*, No one school district shall receive more than $5,000 in any one school year." School districts that have paid tuition in approved local or joint vocational schools or departments shall be reimbursed to the extent of one-half. (Sec. 9.)

Rhode Island.—Chapter 845, 1912, authorizing State aid in support of industrial education:

"SECTION 1. In case any town shall provide instruction in manual training and household arts in its public schools, with the approval of the State board of education, such town shall be entitled to receive as aid from the State a sum not exceeding one-half of the amount expended by said town for the purchase of apparatus necessary for such instruction.

"SEC. 2. Any town that shall establish and maintain day or evening courses for vocational industrial education, including instruction in the principles and practice of agriculture and training in the mechanic and other industrial arts, which courses are approved as to equipment, instruction, expenditure, supervision, and conditions of attendance by the State board of education, shall be entitled to receive aid from the State in support of instruction in such courses to an amount not exceeding one-half of the entire expenditure of the same. The cost of equipment or of buildings or of land or of rent of rooms shall not be included in this reckoning. This section shall not be construed to entitle towns to receive State aid for manual training high schools or other secondary schools maintaining manual training departments, except in so far as such schools include courses properly classed as industrial courses."

The 1912 act carries an appropriation of $5,000, available after July, 1913.

South Carolina.—The high-school act (1907) classifies all high schools as 4-year, 3-year, and 2-year high schools, and provides for aid of $700, $600, $500, respectively, on certain conditions. "Any and all high schools established under this act shall include instruction in manual training, especially in agriculture and domestic science." Additional aid may be given for industrial and commercial subjects.

By rule of the State board of education, adopted April 4, 1913, "State aid in the sum of $100 per annum shall be allowed to any school maintaining a successful and satisfactory class in sewing, cooking, or manual training."

Tennessee.—The education law of 1909 provides for the "General education fund" to include 25 per cent of the gross revenues. Eight per cent of this is to constitute a county high-school fund for aiding county high schools. It shall be the duty of the State board of education to grade all county high schools, "to prescribe their minimum courses of study, requiring the elements of agriculture and home economics to be taught in all schools." "And no county may receive more than one-fiftieth of the fund, and no school shall receive more than one-third the amount received from other sources and expended for maintenance."

The law of 1913 increases the "General education fund" from 25 to 33⅓ per cent of the revenues, and provides for an extra appropriation to each first-class high school in amount duplicating the county money used for agriculture, manual training, or home economics, the maximum from the State being $1,500.

Texas.—By a law adopted in 1909 the high schools of the State are classified according as they give 4-year, 3-year, or 2-year courses and meet certain other conditions. State aid is given, duplicating money set apart locally, for establishing and mantaining one or more departments of agriculture, manual training, and domestic economy. First and second class schools may receive $500 to $1,500 for a department of agriculture and $500 to $1,000 each for a department of domestic economy, and a department of manual training, with a maximum total of $2,000 to any one school; third-class schools may receive $500 to $1,000 for a department of agriculture. The grant may not be made more than twice to the same school. An appropriation of $50,000 a year is made for this purpose. Similar departments were aided in three State normal schools. An act effective September 1, 1914, requires the teaching of cotton grading or classing in the State normal schools, industrial schools, summer normal schools, teachers' institutes, and in all public schools. While this requirement is primarily, of course, for industrial efficiency it will obvously spread knowledge valuable to the household.

Vermont.—The school law (sec. 1004) provides that in elementary schools "the board of school directors may provide for daily instruction in vocal music, physical culture, drawing, and the industrial arts and sciences by a regular teacher or teachers, and a town may instruct its directors to provide for such instruction"; and (sec. 1016) that in high schools "instruction may be given in political, social, moral, and industrial sciences, commercial subjects, ancient and modern languages, music and physical culture, and in fine and mechanical arts."

Act 40, 1908, provided a State grant of $250 for an approved manual-training course in any high or grammar school, but this was repealed by Act 74, 1913.

which provides that a town maintaining a high school of the first class may provide courses or departments of manual training, domestic economy, or agriculture, with special instructors, and for approved courses for which not less than $600 has been paid in salaries, the State will grant $200 for each course or department so maintained. The school boards in the towns of a supervision union may unite in employing special instructors in manual training, domestic science, agriculture, singing, or drawing, and if not less than $600 is paid an instructor in any of these subjects during a school year, the State will make a grant of $200.

Act 62, 1910, established a State school of agriculture at Randolph, and Act 67, 1913, creates a similar school in Addison or Rutland County; in both schools domestic science is included in the program.

Act 77, 1912, appropriates $1,500 for a loan collection of lantern slides, illustrating the "resources, manufactures, industries, physical features, agriculture, and home life of Vermont and the world."

Virginia.—By the law of 1907 county, city, or district school boards, and counties, cities, towns, and districts may appropriate to nonsectarian schools of manual, industrial, or technical training, and may also provide for the introduction of manual or industrial training and other special branches into any public schools.

By the law of 1908 the State board of education is authorized to select at least one high school in each of the 10 congressional districts in which "a thorough course in agriculture, the domestic arts and sciences, and manual training shall be given in addition to the academic course," and "at least one-fourth of the school time shall be devoted to these subjects." "All female students attending the high school provided for under this act shall be instructed in the domestic arts and sciences, and suitable equipment for such instruction shall be provided." They "may also take the agricultural course if they so desire." "The agricultural high schools may be used as centers for directing the demonstration farm work and other extension work through the congressional districts, under regulations prescribed by the State board of education and the president of the Virginia College of Agriculture."

"Regulations of the State board of education, 1911," section 80: "In all the common schools the following subjects shall be taught: Orthography * * *; and local school boards may provide for the introduction of music, nature study, manual training, and elementary agriculture into the schools."

Washington.—By a recent rule of the State board of education eighth-grade pupils taking the examinations for the State eighth-grade certificate will be required after May, 1914, to take an examination in either agriculture, manual training, or domestic science.

West Virginia.—No special legislation, but household arts are taught in larger cities and towns and in several rural communities.

Wisconsin.—Chapter 503, 1907, provides that any board having charge of a free high school, or of a high school having a course of study equivalent to the course or courses prescribed by the State superintendent, may establish a manual-training department in the high school, or in the high school and upper three grades of the elementary school, and that State aid will be given up to one-half the expenditure, but not to exceed $350 for high-school and grade work for each department and $250 for the high school only for each department: *Provided*, That aid will not be given for more than three departments. Two or three high-school districts may unite to secure a teacher of manual training.

By the law of 1901, amended in 1903, 1907, 1909, and 1911, county schools of agriculture and domestic economy may be established by the county board, or jointly by two or more counties. "Instruction shall be given in the elements of agriculture, including instruction concerning the soil, the plant life, and the animal life of the farm; a system of farm accounts shall also be taught; instruction shall also be given in manual training and domestic economy, and such other subjects as may be prescribed." Graduation from common schools is required for admission; special winter classes may be provided. State aid is given of $6,000 if the average daily attendance is less than 112, $7,000 if the attendance is 112 to 137, and $8,000 if over 137.

Wisconsin, in 1909, authorized the establishment of trade schools by cities; the appointment of a local advisory "committee on trade schools"; the levying of a special tax of not over one-half mill for a trade-school fund; and action by the local school board, subject to a referendum in approval if petitioned by 20 per cent of the voters.

Chapter 616, 1911, provides a State system of industrial education with the following provisions: A State board of industrial education; an assistant for industrial education in the office of the State superintendent, with supervision of industrial, evening, continuation, and commercial schools (not agricultural schools); in towns and cities of over 5,000 there shall be, and in smaller towns there may be, a local board of industrial education, with general supervision of instruction; on petition from 25 persons qualified to attend, an industrial, evening, continuation, or commercial school shall be established; a special tax not to exceed one-half mill may be levied; the course of study shall be approved by the State superintendent of education and the State board of industrial education, and "shall include English, citizenship, sanitation, and hygiene, and the use of safety devices and such other branches as the State superintendent and State board shall approve"; State aid equal to one-half the amount expended during the preceding year is granted, with a maximum of $3,000 to any one school and $10,000 to any one city, and not more than 30 schools are to be aided; the schools are open tò persons of 14 years of age or older. The law also directs the State board of industrial education to "constitute a body corporate under the name of the board of trustees of Stout Institute," to accept, hold, and maintain as a trustee for the State this institution at Menominee.

Chapters 505 and 660, 1911, require children 14 to 16 years of age, working under permit as provided by law, to attend evening, continuation, industrial, or commercial schools when established not less than five hours per week for six months or a year; the employer to allow reduction in hours of work.

Chapter 347, 1911, regulates apprenticeship, requiring, among other provisions, that the indenture include an agreement that the apprentice attend school not less than five hours a week.

An act of 1913 (bill No. 142 S.) provides for State aid of $200 for "a short course of agriculture and domestic science in high schools." The course is to be 16 weeks in length and commence about November 1; it "shall not be approved unless the teaching force shall be adequate to properly administer all courses adopted and in force in such school"; and the special course must be "under the direct instruction of a teacher holding a special license from the State superintendent to teach the special subject." Tuition of all pupils attending is to be paid by the towns. The short-course law is limited in its benefits to 20 schools.

Wyoming.—The school law provides (ch. 88, 1895) that the "school board of any district shall have power to establish industrial and manual-training schools in connection with the public schools of said district."

Section 3. STATE CERTIFICATION OF SPECIAL TEACHERS OF HOUSEHOLD ARTS.

The classroom teacher as teacher of household arts.—The standards set as to who may teach household arts in the public schools will determine rather completely the character of instruction given. The subject might conceivably be taught by the regular teacher; it might be regarded as a special school subject to be taught by a specialist. As a matter of fact, both tendencies have been apparent in the teaching of the subject, while, as Dr. Jessup says,[1] "the prevailing means of securing and directing instruction in domestic science has been the employment of special teachers or supervisors, who have taken, in the main, the entire responsibility of this work," yet there have not been lacking examples of the organization of household-arts teaching in the hands of the classroom teacher; and it is evident that some of the most significant instruction in this field—for example, in one-room rural schools—turns on the training of the classroom teacher in domestic science. Some of our best experience and authority to-day points to the teaching of all arts subjects, in the first six grades at least, by the regular classroom teacher, in order to stress the educational rather than the vocational aim in the teaching.

Legal recognition of the need of home economics in the equipment of every trained grade teacher is already in evidence. This is exemplified in the Oklahoma requirement of an examination in domestic science for all first, second, and third grade teachers' certificates; the new requirements of Iowa and Indiana for its general teaching and corresponding examinations of teachers; and the provision of North Dakota which places home economics among the list of required elective subjects from which a selection is to be made in the examination for the second and first grade elementary and professional certificates. The New Mexico law also permits the State board of education to require an examination in domestic science and other vocational subjects in the certification of teachers. A provision of similar import is that requiring an examination in elementary agriculture in the certification of teachers, as in Alabama, Idaho, Mississippi, Nebraska, Texas, and possibly other States, thus reinforcing the preparation of the rural teaching force at a most important point. There is also the similar requirement of an examination in manual training for the elementary certificate in New Jersey. Grade teachers, it would seem, should, as a matter of course, have preparation in home science, and in addition rural teachers should be certified as to preparation in agriculture and urban teachers

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[1] Social Factors Affecting Special Supervision. W. A. Jessup, Teachers College, Columbia University. Contributions to Education. New York, 1911, p. 63.

A. INTERMEDIATE GRADES AT LUNCH, DELTA, COLO.

The luncheon schedule is: Primary, 11.15; intermediate, 11.35; grammar, 12; high school, 12.20.

B. FIRST AND SECOND GRADES AT LUNCH, DELTA, COLO.

For 5 cents the children have: One hot vegetable; sandwiches; rolls or doughnuts; crackers and milk.

as to manual training; or, if we adopt ultimately the proposal to amalgamate all practical arts subjects, agriculture, manual training, household arts, fine arts, etc., into a single industrial and prevocational subject for the elementary grades, then the certification of all elementary teachers should include an examination in this field. A different approach to the same end (of providing some knowledge of domestic science to grade and rural teachers) is, of course, afforded by the laws regarding normal training classes in high schools and normal schools, elsewhere referred to (p. 125), which tend to include domestic science in the curricula. Domestic science in the preparation and certification requirement of every common-school teacher seems a desirable and possible standard. Only thus can large numbers of girls be reached with training for homemaking.

The special teacher and supervisor of household arts.—The related problem of certification of special teachers and supervisors of household science has received more attention. Thirty-three States issue some form of special State certificate to the special household-science teacher and supervisor (Table 1, p. 42), and in at least five other States the special normal-school diploma or other credential or examination by State, city, or county officials provides a modus operandi. Nine States report definitely that no provision has been made for State certification of special teachers of domestic science. Three-fourths of the States, therefore, have considered it desirable to standardize, by State certification, the qualifications of the special teacher of household science. A statement of the regulations as to certification in the different States is given elsewhere (p. 36); there follows herewith a statement of the general tendencies in the State regulations and certain recommendations as to standards.

In the State regulations as to certification of special teachers of domestic science there is a tendency to specify special training in an approved higher institution which requires high-school graduation for admission, and provides a two years' course as a minimum. The minimum is stated as one year by Indiana, but as two years by Idaho, Illinois, Minnesota, New York, and Ohio. Oklahoma specifies special training without defining the amount. Two years of special training is short enough, and with the movement for requiring college graduation for high-school teachers this requirement for the special teacher of domestic science will gradually advance. At present a minimum of two years' professional training beyond high school is a standard which the various States may well adopt as soon as possible.

The time must be at hand for revoking laws or regulations which now permit persons who have had no formal training to qualify by examination as supervising teachers of domestic science. Eighteen

States at least thus grant special domestic-science certificates on examination without even specifying a minimum of training; this open door may be necessary in the initial stages of a new subject, but home economics is beyond such a stage. Now that there are available graduates of colleges, normal schools, and technical schools who have completed a two-year or longer technical course, it is educational suicide to encourage persons to prepare by self-study for examinations as special teachers of household science. If such examinations are continued as a possible alternative to certification on the basis of approved training, it is desirable to throw stringent safeguards about them.

Such a provision as that of Vermont authorizing, without examination, a special certificate to a successful teacher who has held a certificate is also open to objection. It may guarantee a person who knows how to teach, but it has no safeguard as to what is taught. It is a transition measure, of course, to be succeeded, as soon as possible, by certification of persons "of special training," as the same Vermont regulation provides.

One State at least requires the holder of the special certificate to hold also a regular teacher's certificate. This seems unnecessary if teaching ability is guaranteed by training in methods of teaching as part of a two-year technical training.

The Texas plan of permitting cities at the discretion of the city superintendent of schools to hire special teachers, without requiring an examination or a teacher's certificate, disregards the whole value of certification and is not to be recommended.

The granting of the certificate for a limited time, say, one year, to be renewed for two or three years without examination, and then made permanent, or, better, renewable, without examination, for periods of 5 or 10 years—as long as one teaches—is better than the granting unconditionally of a life certificate. The initial life grant is dubious in all cases, and the life grant after a preliminary period may be questionable in case of those who give up teaching and years later wish to resume it without reexamination.

The New York provision that the State commissioner may, in special cases, certificate for vocational schools persons with "intimate knowledge gained by field or shop experience, with evidence of a satisfactory general education," is likely to have occasional significance, especially if the teaching of household trades in industrial schools is organized with its necessity of trade-trained teachers. The requirement of the Pennsylvania vocational law that the practical household-arts teacher must have, in addition to a two-years' special training, "three years' experience in practical housekeeping," is commendable; so is the New Jersey method of having such experience tested by an examining committee of two housekeepers.

The use of the normal-school diploma as a standard for a special certificate, as in Colorado and Wisconsin, is intelligible, and may be recommended elsewhere as the normal schools strengthen their household-science departments. The Maine law giving aid for domestic science to all normal schools, so that every teacher may include this subject in her preparation and special additional aid to one normal school in order that it may train supervisors and special teachers of domestic science, is relevant here.

More desirable perhaps is the statement of standards for such certificates in terms of university or college study of home economics, as suggested in the Montana statute and as stated in detail in the noteworthy specifications for high-school certification in domestic science and art in Utah, where required collegiate courses are quantitatively enumerated thus: For domestic science, three State credits in organic chemistry, physics, economics, physiology, art (high-school art accepted); four State credits in dietetics (two may be in physiological chemistry or advanced physiology); house sanitation (two may be in bacteriology); and six State credits in food. For domestic art, the same, except that botany shall be included or may be substituted for physics, sewing for food, and textiles for dietetics. Such a requirement cuts the ground from under ill-prepared teachers who may hope to "squeeze through" teachers' examinations and secure certificates for teaching an attractive specialty. It suggests the serious standards set in State medical examinations. Truly these teachers of home making need to be competent "social physicians," and the Utah requirements rigidly enforced point one way to guaranteeing their proficiency.

New York City certificates.—The regulations regarding teachers of cooking and sewing and supervisors or "directors" of these subjects may be quoted:

> *Cooking teachers.*—To be eligible for examination for license as special teacher of cooking the applicant must have one of the following qualifications: (*a*) Graduation from a satisfactory high school or institution of equal or higher rank, or an equivalent academic training, or the passing of an academic examination, and the completion of a satisfactory course of professional training of at least two years in cooking; (*b*) graduation from a college course recognized by the regents of the University of the State of New York, which includes satisfactory courses in the principles of education and in cooking; (*c*) graduation from a satisfactory high school or institution of equal or higher rank, or an equivalent academic training, or the passing of an academic examination; and the completion of a satisfactory course of professional training of at least one year, followed by two years' successful experience in teaching cooking.
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> *Sewing teachers.*—To be eligible for examination for license as a special teacher of sewing the applicant must have the following qualifications: (*a*) Graduation from a satisfactory high school or institution of equal or higher rank, or an equivalent academic training, or the passing of an academic examination; (*b*) the completion of a satisfactory course of professional training of

at least two years in the special branch she is to teach; (*c*) one year of experience in teaching sewing, or three years' experience as a class teacher teaching sewing a satisfactory portion of the time. These three years may be inclusive of the years devoted to professional training.

Director.—To be eligible as a director of a special branch, the applicant must have the following qualifications: (*a*) Graduation from a college or university recognized by the regents of the University of the State of New York; (*b*) graduation from a course of professional training of at least two years in the special branch that he is to supervise or teach; (*c*) at least three years' successful experience as teacher of such special branch.

Section 4. STATE REGULATIONS REGARDING CERTIFICATES FOR SPECIAL TEACHERS OF HOUSEHOLD ARTS, BY STATES.

Arizona.—Manual training, domestic science, or kindergarten teachers who are graduates of an approved manual training, domestic science, or kindergarten school may be licensed to teach such subjects by the State board of examiners. If such a teacher can not so qualify, then such teacher must pass such an examination as the State board of education may prescribe.

California.—County boards of education may grant special certificates on examination, or credentials, or both.

Colorado.—The normal school issues special diplomas for domestic science, manual training, and sewing.

Delaware.—The State issues certificates to graduates of approved schools or on examination.

District of Columbia.—Certificates are issued by the board of education of the District.

Florida.—"A special certificate, valid for five years, may be issued by the State superintendent on satisfactory testimonals as to peculiar fitness for teaching any one or more branches not included in the requirement for the second-grade certificate; the candidate shall make a grade of not less than 90 per cent on such branch or branches in such examinations as shall be prescribed by the State superintendent with such assistants as he may select."

Georgia.—Special certificates, entitling the holder to teach or supervise the special subject, and requiring graduation from high school or its equivalent in scholarship, and training in the specialty and in the science and art of teaching, may be granted by the State board of education in domestic science and art, manual training, and certain other subjects.

Idaho.—The State board of education may issue specialists' State certificates good only for special teachers of music, drawing, manual training, domestic science, and physical education to graduates of approved schools which offer courses of not less than two years' work, with high-school work prerequisite. Valid for special subject only for eight years. (See 91, b, law of 1911.)

Illinois.—Special certificate in domestic art, valid for two years in elementary or high schools of the county in which issued and renewable for three-year periods, is granted by the county superintendent. Requirements shall be graduation from a recognized high school, or equivalent preparation, and a certificate showing completion in a recognized higher institution of learning of at least two years of special training in the subject or subjects the candidate desires to teach; or in lieu of that, satisfactory evidence of four years' successful teaching of such subject and successful examination in English and the principles and methods of teaching.

Indiana.—The State superintendent issues "supervisors' licenses" in sewing and in cooking, respectively, valid to supervise and teach the subject in any of the public schools; examination open to persons "meeting the eligibility requirements for a 12 months' common school" (graduates of a commissioned or certified high school who have had at least 12 weeks' normal training) and to those who have had a course of one year or more in some approved school of sewing or cooking. The licenses are issued for 12, 24, or 36 months. The county superintendent issues similar licenses, good, however, only in the county of issue.

The vocational-education law of 1913 provides that "after September 1, 1915, all teachers required to teach elementary agriculture, industrial work, or domestic science shall have passed an examination in such subjects prepared by the State board of education." (Sec. 6.)

Iowa.—The education board of examiners may issue a special certificate to any teacher of music, drawing, penmanship, or other special branches, or to any primary teacher of sufficient experience, who shall pass such examination as the board may require in the different branches. Valid for the branch specified for five years.

By an act approved 1913 elementary agriculture, domestic science, and manual training are required to be taught in public schools after July, 1915, after which date "elementary agriculture and domestic science shall be included among the subjects required in the examination of those applicants for teachers' certificates who are required by the provisions of this act to teach agriculture and domestic science."

Kansas.—Special certificates in manual training, domestic science, and domestic art are issued to holders of valid teachers' certificates who have had special preparation satisfactory to the State board.

Teachers of domestic science and art and agriculture in high schools approved by the State board of education and receiving State aid must be approved by the State superintendent.

Louisiana.—"The qualification of the teacher shall be the equivalent of a full course in home economics in an institution offering specific training to teach the subjects in this course."—"Rules and Regulations * * * to govern Departments of Agriculture and Domestic Science, 1913."

Maryland.—The credentials of special teachers of household subjects must be accepted by both county and State superintendents, or the teachers must be examined.

Massachusetts.—Chapter 375, 1911, provides that after July 1, 1912, no person shall teach in a State-aided high school unless he possesses a high-school teacher's certificate issued by the State board of education. A special certificate is granted in manual arts, domestic science, and other subjects.

Minnesota.—Each high school or grade instructor in sewing or cooking must be a graduate of an accredited technical school and must hold a special industrial certificate secured from the superintendent of public instruction and issued only on the recommendation of persons in position to know the qualifications of the candidate and upon the indorsement of the State inspector.

Missouri.—Special certificates in household arts, valid for five years and for life, are issued as follows: (1) Standard four-year high-school course or equivalent is the required basis for preparation; (2) thorough preparation shown by diploma from special professional school of high rank or by searching examination and other evidences of proficiency in the study and teaching of the subject is required; (3) all candidates for five-year special certificate will be given an examination in pedagogy and elementary psychology, and, in addition, for household arts, in literature, geography, chemistry, physiology, and hygiene, household arts (including drawing and designing). In each examination the specialty will be waived on presentation of a diploma of graduation from a school of recognized standing.

Montana.—Act of 1913, section 905: "(e) Special Certificates. Upon the request of any board of school district trustees or its representatives, or any county superintendent of schools, a special certificate valid only in the district requesting the same may be granted by the State superintendent of public instruction, in music, drawing, elocution, physical, culture, penmanship, manual training, domestic science, agriculture, commercial and kindred subjects, first three primary and kindergarten grades, to any teacher who presents satisfactory evidence of special proficiency for teaching any of the above subjects, as shown by any certificates and credentials held by such teacher: *Provided*, That such special certificate shall be valid only for one year and shall entitle the holder to teach only such special subjects as are stated in said certificate."

Act of 1913, section 1700, provides that teachers in manual-training schools must have the special manual-training teachers' certificate, granted on the basis of "a sufficient general education and the professional and technical training necessary for such manual and industrial training"; and that teachers in vocational-training courses shall have special certificates based on general educational qualifications and "special training and practical experience in the vocation which they are to teach."

Nebraska.—State and city certificates may be granted to a special supervisor of domestic science on examination or, in lieu thereof, on graduation from a recognized special training school.

Nevada.—The State board of education shall grant special certificates valid for music, manual training, penmanship, commercial subjects, kindergarten work, or any specified foreign languages, "provided it shall be satisfied that the applicant is competent to teach such special subject. The board shall determine as to the fitness of the applicant by whatever method shall appear to be most appropriate." Valid for two years.

New Jersey.—"Special certificates" are issued to teachers of industrial and technical subjects; among others, to teachers of cooking, requiring examination in the theory and practice of cooking, household chemistry, and physiology and hygiene; and to teachers of sewing, requiring the theory and practice of sewing, including dressmaking. These certificates are valid for one year, are renewable without examination for two years, and are made permanent after three years of successful teaching. "Vocational certificates" may be issued to applicants for positions in State-aided vocational schools in various subjects, including the "household arts vocational certificate." The limited certificate, granted for one year, requires at least a two-year course in general household arts in a recognized school or college (in lieu of this academic training and adequate experience in household arts may be accepted), and in addition a demonstration of ability to a committee of at least two housekeepers appointed by the State board of examiners. The candidate must further be 21 years of age. The certificate may be made permanent after three years of successful teaching. A "supervisor's vocational certificate in household arts" may be issued to an applicant for a position as supervisor or as principal in a State-aided vocational school, provided she holds a permanent "vocational certificate" and has had adequate experience in a vocational school. This may be made permanent after a year.

New Mexico.—The State board of education is empowered to require an examination in vocational subjects, including domestic science, in the certification of teachers. By recent resolution of the board two credits may be allowed for these subjects toward certification of teachers, but no more. Also these subjects are included in the optional list, but if one is used as an optional and a credit made, only this credit and one other are counted.

New York.—A special license is issued requiring high-school graduation and two years' special training in an approved institution. In vocational schools there are similar requirements of high-school training followed by a completed course in the special subject in an approved professional institution; but in special cases intimate knowledge gained by field or shop experience, with evidence of a satisfactory general education, is accepted in the case of such vocational teachers.

North Carolina.—The teacher in the department of county farm-life school "for special training of girls for homemaking and housekeeping on the farm must hold high-school teacher's certificate on all required subjects except Latin, Greek, and the modern languages, including an additional certificate from the State board of examiners and the president of the State Normal and Industrial College, stating such person has furnished satisfactory evidence of qualifications by special training and practical experience for such position."

North Dakota.—Special certificate for teaching agriculture, the commercial subjects, domestic science, manual and industrial training in the common schools, graded or high schools, may be issued to applicants who possess qualifications equivalent to those for second-grade professional certificate (20 years of age, nine months' experience in teaching). Such certificates are valid for as many years as the State board of examiners may specify. Domestic science is included among the elective subjects in examinations for elementary certificates and professional certificates for teachers.

Ohio.—Special domestic science certificates are granted to graduates of any approved normal school, teachers' college, college, or university who have a minimum of two years' academic or professional training beyond the high school.

Oklahoma.—Special certificates to teach or supervise in special subjects shall be issued by the State board of education to applicants presenting proof of graduation from departments of special work for which certificate is requested, provided such school and department be approved by the State board of education: *Provided further*, That such teacher is holder of State certificate of at least the grammar-school grade.

First-grade, second-grade, and third-grade teachers' certificates all require an examination in domestic science.

Oregon.—Upon the application of any board of directors the State superintendent of public instruction may at his discretion issue a certificate, without examination, to teach in a number of special subjects, including domestic science and domestic art. Before issuing the certificate the superintendent must receive satisfactory evidence of the applicant's fitness to teach the subject.

Pennsylvania.—The superintendent of public instruction shall provide for special examinations and for temporary or permanent certificates for teachers of special branches. He may grant temporary or permanent certificates for teaching special subjects to graduates of approved special schools, under such conditions as he shall make.

The qualifications of special teachers of household arts in the household-arts schools and departments authorized by the act of 1913 are stated by the State department of public instruction, as follows: The director must "have a training equivalent to that received in a household-arts course of a recognized college or a school which gives at least a two years' course in household arts. She should have a certificate which enumerates the subjects she is required to teach." "The practical household-arts teacher will be approved as to qualifications when the following conditions are fulfilled: She should have a certificate which entitles her to teach household-arts subjects; a training equivalent to that received in a two years' course in general household arts in a recognized school; at least three years' experience in practical housekeeping." "The fact that a teacher holds a certificate enumerating household-arts subjects does not necessarily mean that her instruction will be approved."

Rhode Island.—Special certificates are granted by the State, for which evidence of training is accepted.

Tennessee.—High-school teachers are certificated according to departments. "Home economics" forms one department, and for it examinations are required in spelling, English grammar, cookery, sewing, and sanitation.

Texas.—Cities and towns with 500 or more school population have boards of examiners, and any one of such cities, "may, at the discretion of the superintendent of the city schools, employ a teacher of any special branch not included in the requirements for a State certificate without requiring an examination or a teacher's certificate."

Utah.—Requirements for high-school certificates in domestic science and art:

1. *Domestic science high-school diploma.*—An applicant for this diploma must fulfill all the requirements for a regular high-school diploma and must present college credit to the equivalent of three State credits for the following subjects which may be taken in the college course: Organic chemistry, physics, economics, physiology, art (this may be high-school art), and the college equivalent of at least four State credits in dietetics (two of these may be physiological chemistry or advanced physiology), house sanitation (two of these may be in bacteriology), and six State credits in food. This diploma entitles the holder to teach in any elementary or high school for life, provided the holder does not allow five consecutive years to elapse without following some educational pursuit.

1a. *Domestic art high-school diploma.*—Same as above, except that botany shall be included or may be substituted for physics, sewing for food, and textiles for dietetics.

2. *Temporary domestic science or art diploma.*—This diploma may be granted to a teacher who presents all the qualifications of 1 or 1a except the teaching requirements.

In the elementary school the regular certificate is required.

Vermont.—Special certificates may be issued by the superintendent of education, without examination, to a teacher of successful experience in teaching and previous certification in first or second grade or of special training for teaching. Such certificate shall be a license to teach special high-school subjects—e. g., industrial arts and sciences. Such certificates are valid for five or two years, according to the grade of certificate previously held; in the case of special training, the grade of such certificate is to be determined by the superintendent.

Virginia.—A special certificate may be granted to teachers engaged in department work or in special subjects, as manual training and domestic science; valid for five years. The candidate must pass first-grade examination, provided that the examiner may make exceptions for special certificates in music, drawing, and domestic science.

Washington.—Special certificates shall be issued by the county superintendent or the city superintendent in any city to applicants who show by examination or otherwise satisfactory evidence of fitness to teach special subjects, such as * * * manual training, domestic science, etc. The special certificate shall be valid so long as the holder continues to teach in the city or county where granted, unless revoked.

Wisconsin.—The holder of a diploma from a manual training school or school of domestic science, upon the completion of a training course for teachers equivalent to the Wisconsin normal-school course, may present these facts, with evidence of moral character and two years' teaching, to the State board of examiners, and, if recommended by the board, shall be entitled to a certificate from the State superintendent.

Persons completing the training course for teaching manual training and domestic science in Wisconsin normal schools are to be given a license for teaching manual training and domestic science for one year; after one year an unlimited State certificate will be granted.

Any city superintendent may issue certificates to teachers of special branches after such examination as may be provided by the school board and approved by the State superintendent.

Wyoming.—The State superintendent, on the recommendation of the State board of examiners, shall issue a special technical certificate, valid for four years, to teach technical subjects. The candidate shall pass an examination in the special branches he expects to teach, but a certificate may be granted without examination to a graduate of the University of Wyoming to teach subjects covered by his course of study.

Section 5. SUMMARY OF STATE PROVISIONS FOR EDUCATION FOR HOME, BY STATES.

This table summarizes some of the important points in the legislative provision for education for the home stated in the preceding sections; but, especially, it presents the returns of a schedule of inquiry sent to the State superintendents of education.

TABLE 1.—*State provision for education for the home, by States.*

[Entries made in columns below indicate the following: (Columns 2, 3, 4, 5) Is there State legislation authorizing the teaching of household subjects in public elementary schools (column 2)? In public high schools (column 3)? In industrial and vocational schools (column 4)? In rural schools (column 5)? Is instruction in any household subject *required* by law (column 6)? Is there legislation giving special State grants for education related to the home—in elementary schools (column 7)? In high schools (column 8)? Is continuation education in household arts authorized in evening schools or elsewhere for home women and for working girls and others (column 9)? Does the State issue a special license or certificate to teachers of household arts (column 10)? Entry of + indicates yes; 0 indicates no.]

States.	Is there State legislation authorizing teaching of household subjects in—				Is instruction in any household subject required by law?	State grants for education related to the home in—		Is continuation education in household arts authorized in evening schools?	Does State issue special license to teachers of household arts?	General remarks
	Public elementary schools?	Public high schools?	Industrial and vocational schools?	Rural schools?		Elementary schools?	High schools?			
1	2	3	4	5	6	7	8	9	10	11
Alabama	0	0	+	0	0	0	+	0	+	Domestic science required in 9 district agricultural high schools; State aid.
Arizona	+	+	......	+	0	0	+	0	+	State aid, one-half; maximum, $2,500, to designated high schools; similarly to normal schools.
Arkansas	0	+	+	0	0	0	0	......	0	Domestic science in 4 district agricultural schools; State aid.
California	+	+	+	+	0	0	0	+	0	Domestic science required in normal schools; special home economics in normal schools.
Colorado	0	......	......	......	0	0	0	+	0	
Connecticut	+	+	+	+	0	0	+	......	0	State aid, one-half; maximum, $50 per pupil for schools or courses in "trades, useful occupations, and avocations."
Delaware	0	0	0	0	0	0	......	0	+	
District of Columbia	+	+	+	......	0	0	0	+	+	
Florida	0	0	+	......	0	0	0	+	+	
Georgia	0	0	+	0	0	0	+	0	+	Domestic science required in district agricultural high schools; State aid.
Idaho	+	+	+	+	0	0	0	0	+	Domestic science required in rural high schools.
Illinois	+	+	+	+	0	0	0	+	+	Special certificate issued by county superintendent.
Indiana	+	+	+	+	+	0	+	+	+	Domestic science required in grades, and may be in high schools; two-thirds aid to vocational schools and departments.
Iowa	+	+	+	+	+	+	+	0	+	Domestic science required in State-aided normal training high schools; in aided consolidated schools; domestic science required in public schools in 1915.
Kansas	+	+	+	......	0	0	+	0	+	Domestic science in State-aided normal training high schools; local tax for industrial training.

Kentucky	......	+	......	0	0	0	0	......	0	Authorizes domestic science in county high schools.
Louisiana	+	+	+	+	+	+	+	......	0	Requires home economics in all schools; aid for home economics in public schools.
Maine	+	+	+	+	0	+	+	+	0	State aid to town, two-thirds salary; maximum, $800; to high schools, two-thirds; maximum, $500.
Maryland	+	+	+	+	0	0	+	......	+	Aid, $400, high-school teacher of domestic science; $1,500, county colored industrial school and supervised rural schools.
Massachusetts	+	+	+	+	+	0	0	+	+	Cities of over 20,000 must teach manual training; State aid, one-half, industrial schools and "evening classes in household arts."
Michigan	+	+	......	......	0	......	+	......	0	Domestic science may be introduced; county schools of agriculture must teach domestic science; will receive aid two-thirds to $4,000.
Minnesota	+	+	......	+	0	+	+	+	+	State aid to graded consolidated high schools teaching domestic science; also to rural associated schools.
Mississippi	+	+	......	......	......	......	+	......	0	Domestic science in State-aided county high schools.
Missouri	0	0	0	......	0	0	0	0	+	
Montana	+	+	+	+	+	+	+	0	+	Manual training and industrial training above fifth grade required in cities; permissive elsewhere.
Nebraska	+	+	+	+	0	+	+	+	+	Domestic science required in county high schools and in aided agricultural high schools (one-half aid; maximum $1,250) and associated district schools (aid, $50); aid $10 per pupil in manual and industrial courses.
Nevada	+	+	0	0	0	0	0	0	+	Industrial training authorized.
New Hampshire	+	+	......	......	0	0	0	0	0	
New Jersey	+	+	+	......	0	+	+	+	+	State duplicates local amounts for manual training; maximum for district, $5,000; similar aid (1913) to "industrial, agricultural, and household-arts schools," maximum, $10,000.
New Mexico	+	+	......	+	0	0	0	......	0	Domestic science required in county high schools.
New York	0	0	+	0	0	0	+	+	+	State aid for "schools of homemaking" and evening schools.
North Carolina	0	+	+	[1]+	+	0	+	0	0	Domestic science required in State-aided county "farm-life schools."
North Dakota	+	+	+	+	0	+	+	0	+	State aid to selected rural, graded, and high schools.
Ohio	+	+	......	+	0	0	0	0	+	
Oklahoma	+	+	+	+	+	0	+	0	+	Domestic science required by constitution in public schools.
Oregon	......	+	......	......	......	......	......	......	+	High schools may offer two years of industrial work.
Pennsylvania	+	+	+	+	0	0	+	+	+	State aid, two-thirds, maximum, $5,000, for vocational school or department.
Rhode Island	+	+	+	+	0	+	+	+	+	State aid, one-half equipment for household arts; one-half cost of day or evening "vocational industrial education."
South Carolina	+	+	......	+	0	0	+	......	0	Manual training, especially agricultural and domestic science required in aided high schools; possible additional State aid for industrial and commercial subjects; aid of $100 per annum for each high-school class of cooking, sewing, manual training (rule of State board, 1913).
South Dakota	0	0	0	0	0	0	0	0	0	
Tennessee	+	+	......	+	0	0	+	......	+	State aid to high schools for manual training, agricultural and home economics; aid for county organizer of industrial education; domestic science required in normals.
Texas	+	+	......	......	......	......	+	......	0	Aid high-school department of home economics.
Utah	......	+	......	......	0	0	0	0	+	Required in State high-school course of study.
Vermont	+	+	+	......	0	+	+	0	+	State aid of $200 for approved manual training course in high schools or town schools.
Virginia	+	+	+	+	0	0	+	+	+	Domestic science required in 10 State-aided agricultural high schools.
Washington	+	+	+	+	+	0	0	......	+	Eighth grade certificates require either manual training, agricultural, or domestic science (after 1914).
West Virginia	0	0	0	0	0	0	0	0	0	
Wisconsin	+	+	+	......	0	+	+	+	+	State aid, $350 for domestic science in 6 to 8 grades and high school; $250, high school only; $200 for 16-weeks short course in agricultural and domestic science in high schools, county schools of agriculture and domestic economy.
Wyoming	0	0	......	0	0	0	0	......	+	School boards may establish industrial and manual training schools.

[1] In rural high and farm-life schools.

Section 6. STATE SUPERVISION OF HOUSEHOLD-ARTS TEACHING IN SCHOOLS.

Special State supervision of household-arts teaching has been instituted in Illinois, Massachusetts, Wisconsin, Louisiana, Maine, and New York. In the States mentioned a woman expert in such work is employed. In Illinois she is a high-school inspector of household science in connection with the University of Illinois; in Louisiana she is a "State supervisor of home economics" in public schools, in connection with the department of agricultural extension at the State university; in Massachusetts a supervisor of the vocational classes in household arts, under the State board of education; in Wisconsin a State supervisor attached to the office of superintendent of public instruction; in Maine the director of home economics in the Farmington State Normal School is also State supervisor of home economics; and in New York a supervisor of home making was added to the staff of the vocation education division of the State education department in October, 1914. State supervision in a number of other States—New Jersey, Pennsylvania, Indiana, and New Mexico—is provided to some extent for household arts by the special State supervisor of industrial education, in connection with the new industrial education laws; and in at least two States, Minnesota and Tennessee, such supervision by the State high-school inspector is directed to the introduction of home economics. The provision of State supervision of household-arts teaching in the schools seems one essential point in its rapid and successful introduction; whether the necessity of such inspection will continue permanently is another question.[1]

The Louisiana supervisor of home economics gives the following facts as to her work with the 60 public-school departments and the 4 normal-school departments:

> The State gives $500 aid to each school teaching home economics and requires two rooms well equipped. The same credit is given for the work in home economics as for any other line of work, and it may be substituted for Latin or geometry.
>
> Every teacher of home economics is supposed to do some extension work either in the town or in the near-by country. This extension work is in the form of clubs for the study of cooking or sewing, home nursing or sanitation, or anything connected with the home. Besides the mothers' organizations, the girls are organized into clubs for work in gardening and the preserving of garden products, and these are under the direction of the home economics teachers. Many of the schools are working out a plan for noon luncheons.
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> There are several interesting experiments under way. One is to have a model home for the principal and his wife, and have this used as a "show" house for the people of the community. Another is the making of a home economics

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[1] Those interested in State inspection might well secure information as to the methods employed by the provincial inspector of household science, education department of Ontario, Toronto, and should also consult the reports of the "women inspectors" of the English board of education.

center department along the lines of a regular home, having a bedroom, dining room, kitchen, and bathroom, to be used as a laboratory for the classes. We have 10 baby outfits that we are using for a traveling exhibit. We send one of these outfits to a rural school where there is no department of home economics and leave it there long enough for the teacher to use it as a model for an outfit to be made by the girls for that school. Then we try to induce them to buy a doll, regular baby size, and keep it in the school, letting it be brought home as a reward for home work well done. We hope to be able to do much with this exhibit. We have a number of the little one-room rural schoolhouses around the State that have been abandoned and the district consolidated. In some cases these have been made into charming little domestic-science departments or centers.

Miss Emma A. Conley, State inspector of domestic science for Wisconsin, writing of her work, says:

We have 150 high schools where this work is given, and so this past year an inspector of domestic science was appointed whose duty it is to inspect rooms, equipment, work, pass on the course of study, the teaching ability of the teacher, the standard of work required and maintained in schools, to consult with school boards when they desire to add domestic science to the course, to give talks on the subject whenever her services are required, and to organize the work and put it on a fairly uniform basis. In addition to the high-school work, State aid is now given for cooking and sewing work in the two or three room graded country school, if the work is up to standard.

Certain definite requirements are fulfilled for State aid and for credit as a high-school subject so that it may count toward graduation, and be equivalent to other high-school work. These requirements are: Equipment adequate; rooms adequate for needs; course of study planned in detail and approved by the State superintendent; legally qualified teacher; inspection by State inspector of domestic science; and work of teacher must be satisfactory.

The aim is to have the work so well planned in every high school that the girl taking the work will be prepared to take complete charge of a home. This means improving the course of study by providing less actual cooking, and more study of the place of foods in the diet, and by strengthening the work in household management, hygiene, sanitation, and care of infants.

Mrs. Eva W. White, formerly agent of the Massachusetts State Board of Education in supervising vocational classes in household arts, writes as follows:

I believe strongly in State supervision for the purpose of standardizing work in a State and of bringing to the various communities the accumulated knowledge which it is possible for agents of a State board of education to gain.

I do not believe, however, in any form of State supervision which drives communities to the working out of particular methods or adopting particular courses of study. I believe in State supervision which stimulates and which throws on the local communities the full responsibility for initiative and for the development of their schools.

I believe that State money should be expended in the line of experiment or in order to help communities carry on types of schools where the need is clearly evident, but where the expense of maintenance, as gauged by the tax rate, is too great for a community to assume. Such State subsidy and State supervision, in order to justify this subsidy, is allowable because of the general good in the life of the State.

I believe that a State supervisor should continually keep in touch with the communities through personal visits, through correspondence, through meetings organized in the various localities, and through teachers' meetings. The State requirements, however, should be worked out on the basis of mutual cooperation. The State supervisor should not be a censor.

Section 7. SUMMARY: A STATE PROGRAM OF EDUCATION FOR THE HOME.

There is presented herewith, in summary, a brief statement of points comprising a State program of education for the home as they may, with advantage, be expressed in its school legislation.

1. A requirement that household arts be taught in every elementary school, city and rural.

2. State supervision of household-arts education by an expert inspector, preferably an assistant attached to the office of the State superintendent of schools, who can give direction to the development of a progressive program.

3. Home economics included as a part of the normal-school preparation of every grade teacher and as a part of the course in all training classes for teachers, city and rural, so that household-arts teaching may be included in the grade work of the regular teacher.

4. A certificate for special teachers of household arts requiring not less than two years of professional training beyond the high school, and for supervisory teachers a three-year or, preferably, a full four-year course.

5. A State grant toward the salary of special teachers of household arts and supervisors of household arts—that is, of teachers with the specified preparation who devote full time to household teaching.

6. A system of supervision of household-arts teaching in rural schools, through a visiting teacher who gives special instruction and who aids the regular teacher in this special field (see Baltimore County plan, p. 48); by a system of consolidation of rural schools; or by the Minnesota system of associating rural schools with a central school.

7. In secondary education encouragement of household science teaching in all public high schools; first by State grants toward teacher's salary, and ultimately by a requirement that the subject be offered at least as an elective.

8. The recognition of household arts and homemaking in the new program of vocational education by giving these subjects a place coordinate with training for industry, commerce, and agriculture.

9. Prevocational classes of the seventh and eighth grades in household arts and in other fields to hold pupils who now leave school—but not to encroach on fundamental education of a general character.

10. On the secondary level, distinct vocational training in household arts and in other fields—by day schools, by part-time continu-

ation schools at daytime hours, or by evening classes to be done away with as soon as the part-time continuation school at daytime hours can be introduced. This vocational training will be given in special schools such as are illustrated by the county schools of agriculture and domestic economy in Wisconsin and elsewhere (p. 55), the Garland School of Home Making in Boston (p. 148), and the distinctly vocational courses in household arts in public high schools (p. 93); but especially will practical vocational training be given in continuation classes in household arts and home making, in connection with the public schools, to reach three definite groups: (*a*) the housewife, home maker, and young woman living at home; (*b*) the wage-earning houseworker or "servant"; and (*c*) the wage-earning young woman in other employments who desire to improve her skill in home making; these classes will treat unit subjects, will meet at daytime hours, and for the wage earner will provide opportunity for such study on the employer's time (see p. 113).

11. Higher institutions, normal schools, technical institutes, and colleges will provide vocational instruction upon a higher level.

12. The program of extension education to reach the homemakers of the present generation to be carried out both in city and country. In the city this involves lectures, day and evening classes under the public schools, and instruction by settlements, philanthropic societies, churches, and other agencies through classes, visiting housekeepers, home schools, or model flats, and other means. In the country the prime need is for movable schools of homemaking, and visiting advisory teachers of housekeeping, whose work as consultants may be developed in connection with the farm demonstration work in agriculture. Meanwhile women's institutes, homemaking clubs, correspondence courses, housewives' bulletins, and similar agencies are utilized increasingly by agricultural colleges and local schools to reach the rural home.

II. THE RURAL SCHOOL AND EDUCATION FOR THE HOME.

The problem of rural home betterment has been approached through many popular educational agencies, such as the grange, institutes for farm women, and the visiting household teachers whose work will be organized with that of county agricultural experts (see p. 159); through systems of extension education for the home radiating from the State colleges and universities; and, most hopefully of all, through the enlistment of rural schools in the home education movement.[1]

Section 1. THE RURAL DISTRICT SCHOOL.

At first thought the rural district school seems impregnable against any such reform as the teaching of household arts. There is but one teacher; she must teach all the grades, which means 20 or 30 classes a day. Not only is there no money for equipment, but no room for it if it were purchased; and the patrons "know how to cook." Yet, in the face of graver difficulties than those cited, wide-awake rural teachers are experimenting and securing the cooperation of patrons in adding to general education a vocational interest in agriculture for boys and rural homemaking for girls.

It is particularly important to recognize that the rural district school, especially the consolidated school, is becoming a community center in much the same way that the urban school is. Teachers in rural schools are organizing women's clubs, mothers' organizations, country-life associations of men and women, and these in turn are furnishing leadership in the better-living movement of the country.

There will be cited here certain pieces of pioneer work.

Rural schools of Baltimore County.—Miss Letitia E. Weer, supervisor of home economics in Baltimore County, Md., public schools, furnishes the following statement regarding the teaching of home economics under her direction:

> Rural school work in home economics was begun in 1912–13, and while there is the usual difficulty in not having trained teachers responsible for the work, much progress has been made. The policy is to furnish rural teachers with

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[1] Those interested in the rural-school problem should note also discussions elsewhere of (*a*) the State aid now generously given in many States for the introduction of education for agriculture and home arts into rural schools (p. 9); (*b*) the training of teachers who go into rural schools so that they will be competent to teach elementary home economics (p. 125); see also the rural extension work of colleges in Part III of this report.

A. ABANDONED DISTRICT SCHOOLHOUSE USED AS A DOMESTIC SCIENCE CENTER IN LOUISIANA.

B. MODEL HOUSEKEEPING FLAT, ASSOCIATION OF HOUSEKEEPING CENTERS, NEW YORK, N. Y.

outline lessons on various subjects, such as fire, water, various food materials and cooking processes, dish washing, house cleaning, and other problems in the household.

The instruction extends from the sixth grade through the fourth year of high school, and is a recognized part of the course of study. This includes cooking and sewing in the elementary schools and advanced work in the secondary schools. Baltimore County surrounds Baltimore City, and has three distinct types of schools—those with city conditions, the suburban, and the rural schools. The first and second groups are reached by special teachers who visit the schools, remaining varying lengths of time, according to the number of classes to be taught. The rural-school group has been and still is the most difficult one, for so much depends upon the school-teacher. We are trying to solve the problem in Baltimore County in two ways; first, schools situated within reasonable distance of a school having an equipped room send their pupils to that center by trolley, railroad, or team. Classes are planned so that several visiting schools may come at noon and remain through the afternoon, thus having cooking one and one-half hours and sewing one hour, under the instruction of the special teacher.

The situation in isolated rural schools makes this plan impossible, so we are using another method. A home economics club is formed in the school. A very simple, portable equipment is installed for the use of the club members, and the work is carried on under close supervision. In one case the teacher of the school gives the lessons to the girls; in another, women of the neighborhood. The latter development came about in this way:

At an afternoon meeting of the patrons' club, in which there had been thorough discussion of the problems of the home economics club, it was suggested by the chairman that different women assume certain lessons, each selecting her specialty. The suggestion met with a ready response, and the list of lessons and method of procedure were worked out.

It is understood that whether the class is taught by the teacher or by the patrons the outline for the work will be carefully followed. Definite instruction material is furnished by the supervisor of home economics to the principal of the school. This includes recipes, methods, explanation, and emphasis of important points of the lesson, together with a set of questions which review the lesson in detail. Each student has her special home economics blank book, in which all work must be written in ink. This book must always be ready for the inspection of the supervisor. The teacher is responsible for all of this part of the work. The Elements of the Theory and Practice of Cookery and Farmers' Bulletins of the United States Department of Agriculture are used as references.

The recipe to be used is followed by the instructor, whether teacher or patron. Interesting results that have followed are the closer cooperation of patrons and school and the introduction of daily hot lunches prepared by the girls of the club (most of the material donated by the patrons).

The sewing in the rural schools is a regular part of the grade work under the supervisor of home economics. Group meetings are held regularly and classes frequently visited.

Toward the end of the year an exhibit from all the schools furnishes an opportunity for competition and has proved an efficient way to arouse interest and cooperation.

An experimental rural school—Winthrop College.—Experimental work in developing a curriculum in household arts for rural schools has been under way at the rural school of Winthrop College, South

Carolina, in the last few years in the experimental rural school located on the campus. The children have prepared one hot dish each day for their noon recess and have either contributed 2 cents a day for the expense or have brought materials from home, as suggested by the teacher, the majority bringing food. A systematic study of food principles and food composition was begun last year with two or three lessons a week, one hour in length. The school garden contributes to the school table. Cooperation with the home is sought, and the parents are asked to allow the children to repeat the cooking lessons at home. The cooking lessons furnish subject matter for number work, spelling, and written work. The boys participate in the lessons. Seasonal lessons, as for Halloween, Thanksgiving, etc., are introduced.

Model rural school—Hays Kansas Normal.—The model rural district school of the Western State Normal School of Kansas follows the regular State course of study, but emphasizes things usually neglected in rural schools—music, drawing and color work, woodwork with knife, sewing, elementary agriculture, and other occupations. The work in household arts is described by the teacher, Miss Julia M. Stone, as follows:

> Our attempts are modest; we aim to include about such work as might be given in the ordinary first sewing course in any standard school. This is hand sewing entirely. It includes instruction in implements and materials used; the different basting and sewing stitches, and their uses; different kinds of seams, hems, etc., and their application; overcasting, overhanding, patching, darning, buttonholing; sewing on buttons and hooks and eyes; matching and joining of lace and embroidery; gathering, tucking, putting on bands, plackets, etc. This is done first in the form of small models and later applied in the making of garments. Our school has a doll for which the lower grades make articles of clothing, because these can be finished before the task becomes irksome, and yet they may include every exercise that would be found in a large garment. The older pupils also make simple garments or fancy articles for themselves. Some attempt is made also to teach good taste in color combinations and decoration. All grades from the third up take the work, but as it can be given only once or twice a week, progress is not very rapid. All enjoy it very much, however. Cookery is given from the fifth grade up to both boys and girls, once a week.

Field work in rural schools.—Certain normal schools and colleges which fit for teaching, particularly rural teaching, have made special efforts to acquaint the intending teacher with rural conditions. The State Normal School at Harrisonburg, Va., has successfully used rural schools for observation and practice teaching under supervision by the normal school faculty, and the work in household arts has been especially successful (p. 122).

The department of domestic science of the University of West Virginia has been experimenting with practice work in rural centers by college students. Last year a sewing class was held in schools and this year the department is planning a course of 30 lessons to show what can be done by a teacher in a rural school who has limited training in home economics.

The department of home economics at Cornell University is beginning to give assistance to rural schools in the vicinity of the university through its extension class. This class is composed of young women, mostly seniors, who are preparing to teach. The school constitutes a laboratory for the class. A lesson in cocoa making, egg cooking, making white sauce, bread making, or table setting and serving, is given at each visit to a rural school. Members of the class, cooperating with the rural school-teacher, drive to the school, carrying with them an oil or alcohol stove, necessary utensils, and supplies for a simple lesson. One student demonstrates the making and baking of bread, another develops the geography lesson from the growing and marketing of wheat, another develops the arithmetic lesson from the recipe for making the bread. The nutritive value of the food is explained in simple terms. This work has led to prize bread-making contests in rural schools.

State courses of study.—The Missouri State Course for Rural Graded Schools, 1911, recommends that sewing, while not required, be made part of the elementary curriculum. The general direction given is: "Do not try too many articles; excellence of work and some technical skill are more to be desired." It is suggested that children bring materials from home and receive instruction in the various stitches and in applications, such as: Sewing bags, tea towels, and even children's clothing. Mending, darning, pressing, brushing, and storing clothing; use of gasoline, chalk, and acids in removing stains; and laundering are also suggested as topics. For cooking one period of 75 to 90 minutes a week may be secured by closing school at 3.15 or 3.30 on cooking days.

The South Dakota course of study for elementary schools recommends dividing the girls in rural schools into two groups, those under 12 and those over 12, for work in household arts; and that clubs of girls be organized to work at home Saturdays.

The Illinois course of study, 1912, recommends that household arts be taught under "General exercises" in fifth, sixth, seventh, and eighth years. A course in sewing is outlined for the fifth and sixth years, and a course in cooking for the seventh and eighth years. It is recommended that two periods of 75 minutes each be given to this work each month, using time after recess in the afternoon of the first and third Fridays of each month.

Supplementary farm industries should form an element in courses of home economics for rural schools. Thus the Ohio "Course of Study for Agriculture in Elementary Schools" suggests such matters as "garden, poultry, lawn, dairy, apiary, and birds," as well as, under domestic science—

> homemaking and housekeeping, cooking, bread making, and all baking, sewing, house decorating, butter making, the health of the home, and the farm premises, buying, selling, home economics, home sociology, nursing, accounts, care of house, and prevention of sickness, laundering, recipes.

The possibility of simple beginnings in household arts in rural schools is well put in the Teachers' Manual for the Elementary Schools of South Carolina (1911), as follows:

> One of the most important services a teacher can render is to stimulate the natural impulses of the girls in her school toward the improvement of the home. Perhaps not many schools at present can introduce a course in cooking. It can be more easily done than the teacher will imagine. If the teacher has the workroom, a cook stove and a few necessary utensils can be gathered at the schoolhouse. This, however, is not necessary. Excellent work has been done by teachers who have simply organized "homemakers' clubs" among the larger girls and have encouraged them to meet at their own homes and follow out the suggestions of the teacher or the directions which have come from the supervisor of the State.

County courses of study.—Some county superintendents of schools are carrying on an active program for the introduction of household arts in rural and town schools. The county superintendent of Christian County, Ill., drew up in 1908 a 20-page outline of lessons in household arts for instruction in the seventh grade, which has since been enlarged and made the basis of valuable work. "The boys are expected to study the theory of foods and nutrition, while the girls will be expected to try the recipes at the school if possible; if not, then at home." Outlines have been printed by some progressive district schools; thus District 75, of Cook County, Ill., prints a 2-page circular outlining manual training for boys and domestic arts for girls.

Household arts in teachers' institutes.—It is noteworthy that in agricultural extension a definite effort is made to get farmers' institute speakers on better farming methods before teachers' institutes, and thus aid in introducing some informal teaching of agriculture into rural and village schools. Education for the home must follow the same clue by introducing household-arts teaching into the teachers' institutes, as has been done in the Tennessee institutes.

Section 2. THE WARM LUNCH AND FOOD TEACHING IN THE RURAL SCHOOL.

A practical way to introduce some simple cooking instruction into rural schools is for the teacher to arrange for a hot dish cooked by some one student or a committee supplemental to the cold lunches brought from home. This method, early urged by Ellen H. Richards in a pamphlet on "Rural School Lunches," has been widely adopted.[1] The Cheney (Wash.) Normal School has taken a strategic step by providing special instruction for all prospective students desiring it in the preparation of the supplementary warm dish at school for children who bring a lunch basket.

> For the demonstration of this problem a department has been installed in which students will be given an opportunity to observe and also to assist in the daily preparation and serving of one warm food to 50 children. The success of the work has aroused so much interest and enthusiasm that the department has been enlarged, and is now prepared to send out teachers well equipped for the economical and efficient introduction of the hot noon lunch.

The State department of public instruction of Nebraska, in a circular of August, 1913, on agricultural training, urges that for the rural schools a weekly 75-minute lesson in sewing be provided, and that the daily hot lunch be made a means of teaching some domestic science.

> The cooking that can be done will be in the nature of some warm dish prepared for the noon meal. This dish may be potatoes, soup, or some kind of meat. A certain pupil may be given the work for the day, and this can be so alternated that all of the larger girls will have an opportunity at this work.

Equipment for rural school lunches.—The University of Idaho, in a recent bulletin on school lunches, recommends a list of equipment costing $17.81, which includes a kerosene stove and oven costing $11 and a kitchen table costing $1.95. This table is ingeniously made into a kitchen cabinet by inclosing the space below the table and between the legs with a cracker box painted white. The other items recommended are: Kettle, 70 cents; saucepan, 20 cents; two muffin pans, 70 cents; bowl strainer, 25 cents; egg beater, 35 cents; pot scraper, 10 cents; iron basting spoon, 10 cents; tin measuring cup, 10 cents; two dredge boxes, 10 cents; No. 7 frying pan, 35 cents; rinsing pan, 25 cents; 10 by 15 drip pan, 25 cents; butcher knife, 60 cents; kitchen knife, 35 cents; iron-handle knife and fork, 15 cents; 3 teaspoons, 6 cents; quart measure, 15 cents; potato masher, 10 cents. In addition, each child is to have individual equipment of a soup bowl, cup, plate, spoon, knife, fork, and paper napkins. Similar publications on equipment for rural school lunches have been issued by the State College of Colorado, the State College of Iowa, and other institutions.

The problem of equipment for cooking in a 1-room school has been solved at Fruitville, Mo., by pitching a 12 by 14 tent across the platform in front of the schoolhouse and arranging it as a real kitchen, with stove, table, cupboard, and the equipment of the usual farm kitchen. Fire is laid before school and started at recess. At

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[1] Whitcomb and Barrows, Boston, 15 cents. See, also, "The rural school warm lunch." Mary L. Bull. Journal of Home Economics, 4 (1912), p. 477.

11.40 the children responsible for that day's menu go to the kitchen, while the teacher discusses with the rest the cooking lesson for next day. At 12.20 lunch is served. In the early fall canning of fruits and vegetables, to be used for lunches later in the year, is undertaken; a little later nuts are studied, and in the butchering season meats form the material of instruction. Thus the lessons grow directly out of the things that are at hand.[1]

Section 3. THE CONSOLIDATED SCHOOL AND HOUSEHOLD ARTS TEACHING.

The consolidation of rural district schools into a stronger centralized school means, among other items of progress, the possibility of teaching home science to girls and agriculture to boys, not as an incident in the work of the general teacher, but by the trained service of a specialist. The Minnesota law, for example, regarding consolidated schools sets the same standards for teachers as in villages and cities, and requires instruction in agriculture, manual training, sewing, and cooking in every consolidated school that receives State aid. State aid is give not alone for maintenance of instruction, but also for the provision of an adequate building and equipment which must meet standards set by the State. Minnesota adopted a more generous plan of aid to consolidations in 1911, and in the two following years over 600 consolidations took place. The progress toward consolidation in other States is also emphasizing household arts teaching.

In the home-economics course in the Minnesota consolidated schools, industrial education is to begin in the seventh grade, and is to be given for not over 200 minutes a week. Cooking is planned for five 40-minute periods a week for one year, one period for theoretical work and two double periods for practice; sewing is outlined for 160 minutes a week for two years; textiles for 40 minutes a week for one-half year; laundering for 40 minutes a week for a half year, with instruction and demonstration; personal and home hygiene, 40 minutes per week for a year.

Section 4. SPECIAL AGRICULTURAL SCHOOLS AND EDUCATION FOR THE HOME.

Many of the States have established special secondary schools of agriculture, and practically without exception home education for girls has been provided parallel to agriculture teaching for boys. The establishment of such schools may be by county action, as in Wisconsin or Mississippi, or by direct State action, as in New York, where several schools have been located in different parts of the State.

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[1] Miss Helen Swift, Fruitville, Mo., in Missouri State Board of Agriculture Bulletin, March, 1913.

In Georgia, Alabama, and Oklahoma special schools have been established in the congressional districts; in Arkansas four district schools have been established; and in Virginia a special State grant has been made to one high school in each congressional district. This type of school makes possible a more thoroughgoing kind of vocational training in homemaking than high schools can usually provide. Another important consideration is that most of these special agricultural schools provide dormitory life for their students, and this is usually utilized as an element in the home-training course. Details of typical schools are given.

County schools of agriculture and domestic economy, Wisconsin.—Seven county schools of agriculture and domestic economy have been established in Wisconsin under the law of 1901. One of the recent establishments, the Milwaukee County School, at Wauwatosa, may be described to illustrate what these schools are doing in domestic economy. It gives instruction in farming, homemaking, and community welfare to boys and girls who have finished the common schools, offering three-year curricula in agriculture and in domestic economy. In addition, the school undertakes considerable extension work in both fields. The domestic-economy department offers 29 different courses in cookery, dietetics, homemaking, foods, home nursing, laundry, household management, design, sewing, dressmaking, millinery, textiles, household chemistry, and bacteriology, which are combined with academic work in English, mathematics, and rural welfare, and with courses in agriculture of interest to women. High-school graduates can complete the course in two years.

The school is located on a farm of 236 acres, a mile and a half from Wauwatosa, accessible to day students as well as to boarding students. A residence hall provides room and board. The plant includes buildings for horticulture, dairy farming, mechanics, poultry, etc. The second floor of the administration building is devoted to domestic economy, with a sewing laboratory, food laboratory, and a practice home consisting of a suite of rooms.

The school maintains an annual conference on rural and suburban life, and a summer session called the "Out-of-doors farm school for boys and girls." This summer session—six weeks in length—is intended for boys and girls between 14 and 17 years of age, "and offers exceptional opportunities to the boys and girls of the city to spend part of their vacation in recreation and study along lines of work which would not be available within the city." Opportunities for camp life are provided the boys, and the dormitory is used for the girls.

The domestic-economy department has undertaken extension work in the organization of women's domestic clubs; the organization of the first club was prepared for by a house-to-house canvass of 75 homes.

What is done at Wauwatosa illustrates sufficiently the work of the six other county schools of agriculture and domestic economy of Wisconsin.[1]

Virginia has provided that in at least one high school in each congressional district agriculture, domestic science and art, and manual training shall be taught, State aid being given for these courses. The Manassas (Va.) Agricultural High School is one of these schools. It offers a two-year course in domestic science, including in its food study the serving of dinners for the monthly farmers' institutes which meet at the school. This institute includes a woman's auxiliary for home-economics discussions. Other extension work includes club work, lectures, and demonstrations, expert advice, and aid to rural schools in agriculture and domestic science teaching. Besides the agricultural, domestic-science, and manual-training courses, the school maintains a college-preparatory course and a normal-training course. The latter includes domestic science.

County agricultural high schools of Mississippi.—Any county school board in Mississippi may establish an agricultural high school. This school must employ a skilled agriculturist as a teacher, and must also have a teacher of home science. Twenty-seven of these schools were recently recorded as in operation and eight more in construction, with 3,000 pupils in attendance, of whom 1,600 were boarding pupils. Over 900 of the pupils are reported as working part of their way through school, and 200 of these are entirely self-supporting. After the first year board is estimated to cost $6 a month and dormitory expenses $4 to $5 a month per pupil.

The course of study drawn up for the schools includes 4 units of agriculture for boys and 4 units of home science for girls, 4 units of English, 2½ units of history, 2 units of mathematics—a total of 12½ units required. A minimum of 3½ units of elective work in addition is necessary for graduation.

The course of study in home science includes cooking, serving and etiquette, sewing, millinery, home care of the sick, feeding of invalids and infants, laundering, dietetics, house planning and decoration, gardening and floriculture, poultry raising and marketing, preserving and canning, sanitation and hygiene, study of texture, manufacture, cost, and durability of fabrics, household management, and keeping of accounts.

The schools are expected to undertake extension work for the improvement of agriculture and country life. The development of teacher training departments is contemplated.

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[1] See, also, "County schools of agriculture and home economics in Wisconsin." A. A. Johnson, U. S. Department of Agriculture, Experiment Stations Bulletin 242.

Jamestown Farm-Life School, North Carolina.—Domestic science was introduced into the Jamestown State High School, Jamestown, N. C., in 1911. By special act of the general assembly of that year there was established a farm-life school, receiving State aid, with the object of giving the boys and girls of the country a new vision of the social and economic possibilities of rural life.

In choosing their course of study the girls are allowed to take either Latin or home economics; the boys take either Latin or agriculture. This arrangement applies to the four years of high school. Some pupils of exceptional ability and energy carry both subjects.

The work in home economics at present embraces the general subjects of cooking and sewing, with additional topics, such as invalid cookery, home nursing, house decorating, and first aid to the injured. The second-year class was required last year to make a miniature house on paper, showing the color scheme, arrangement of furniture, and the general plan and furnishings. The chief consideration is to give the girls things that will be of practical value to them at home or in their future work. The third-year class made their commencement dresses. The method pursued in the conduct of the classes is to have recitations based on the text two days in the week, experiments one day, and a double period for laboratory work one day. The teacher in domestic science is employed for her entire time, the idea being that some form of extension work shall be carried out during the year. The tomato-club work for girls has been the chief channel through which this side of the work has been developed so far, but a special effort has recently been put forth to interest the adult women of the community. Some mothers' meetings have been held, at which such everyday topics as arrangement of the kitchen, feeding the baby, making bread, etc., are discussed. The response to the call of these meetings has been encouraging. While this work is only in its infancy, results are already seen which promise greater usefulness in the future. The course seems to be meeting the need of instruction adapted to southern rural conditions.

The California Polytechnic School, San Luis Obispo, is a State vocational school of high-school rank for both boys and girls. It offers three principal lines of instruction—agriculture, mechanics, and household arts. The polytechnic school has recently extended its course to four years in length. In household arts the following courses are offered: General science, domestic science, dietetics and nutrition, home economics and sanitation, plain sewing, dressmaking and millinery, advanced dressmaking, home gardening, drawing and design (four courses). In the household arts curriculum, mathematics, physiology, English, chemistry, physics, botany, general history, and United States history are required in addition to the courses stated.

Section 5. BOYS' AND GIRLS' CLUBS AND HOME IMPROVEMENT THROUGH THE RURAL SCHOOLS.

Popular education for the rural home has found an important agency in the clubs of boys and of girls formed, usually in connection with the rural schools, to carry on some contest, such as in corn raising, bread baking, tomato canning, sewing, gardening, etc., one result of which has been the learning of some useful process and the acquiring of a skill that can be employed sometimes for remuneration, sometimes in producing products for immediate consumption in the family. The new earning power makes possible a better home; the new skill, if it is in the household arts, itself means better housekeeping. The club work has usually been initiated by the State college, State department of education, or the United States Department of Agriculture.

The first State-wide movement was in New York in 1898, beginning in nature-study lessons sent out to the schools by Cornell University, and since developing into corn growing and other agricultural interests and contests in sewing and bread making for girls. In 1910 the Cornell farm boys' and girls' clubs had a membership of 75,000. The Nebraska clubs were organized by the State department of education in 1905, and the department of domestic science of the State university cooperated with the girls' work. In Ohio the extension department of the State university organized clubs; in Illinois the county superintendents of schools and the farmers' institutes initiated the work. Certain Iowa counties and Southern States, notably Texas (1903) and Georgia, were early organizers of clubs, while the United States Department of Agriculture through its farm demonstration work has in the last few years extended corn clubs for boys and, since 1910, tomato-canning clubs for girls throughout most of the States. In 1910 partial figures showed 28 States, with 2,132 counties, reporting that 395 counties had organized for club work with 144,170 members in the clubs. Ten of the States then utilized household arts in club plans.

The clubs have often been connected with the rural schools, and such an organization promises best for wise direction and permanence. The contest feature in the clubs and the exhibiting of products at school, local, county, and State fairs have undoubtedly greatly stimulated the movement. The wise direction which the State departments of education, the State universities and normal schools are giving the movement, and similar help from county superintendents of schools, may be trusted to make of it an educational agency and not a mere means of income seeking. In Idaho, for example, the State superintendent of public instruction, with the cooperation of the State university in preparing home economics bulletins, and of county school superintendents in effecting local organization, has since 1912 secured the organization of over 500 clubs with a membership of over 5,500. In Nodaway County, Mo., the county agricultural and domestic science association, an organization in which teachers take an active part, established contests in 1908 and furnishes score cards and rules for school contests in bread, cakes, canned goods, shirt waists, aprons, dolls, etc.

The Kansas home economics clubs of the Kansas State Agricultural College were organized in 1911 as one method of reaching girls from 10 to 20 years of age throughout the State who do not have the opportunity for such training in schools. The clubs are organized in two grades, junior clubs for girls from 10 to 14, and regular clubs for girls 14 to 20 years of age. The organization is intended to reach any groups, in schools or out, in industry or at home, in town or country. The local club organizes with a housekeeper or teacher as leader; the teacher, it is suggested, may have the club meet at noon, or after school, or on Saturday, or some housekeeper may conduct a club at her own home. The basis of cooperation with the State college requires such a leader, a regular time and place of meeting for the club, and a weekly report to the extension department of the college. A constitution is adopted, which states the object of the club "to promote the interests of the home." The college furnishes printed lesson sheets, a copy for each lesson, to the individual club member. Two lines of work are offered, cooking and sewing; in sewing, two courses each of 20 lessons are offered—hand sewing, drafting, and making undergarments; in cookery, three courses are offered, the first two covering the general field of foods, both theory and practice, while the third course is devoted to special subjects.

In high schools, two lessons per week of each course may be taken if the work is conducted by a regular teacher; in clubs, one lesson a week in any one course is usual, though two lessons may be allowed; college admission credit is not allowed for club work, but it may be considered for work given in high school under a competent teacher. A fee of $2, $2.50, or $3 for each course, varying according to the size of the club, or $1 for an individual taking the course, is paid to the college; local expenses for supplies and other necessaries are met by membership fees. Suggestions as to simple equipment are furnished to the clubs—the provision at the school building of a range, gasoline, or oil stove; a table made of boards, saw horses, and necessary utensils; the use of the kitchen of the woman acting as leader; or even the home kitchens of the club members. It is suggested that clubs arrange exhibits of their work in sewing, or serve some of their cooked products to parents and friends; and that funds for the expenses of the club be obtained by sales of articles made in cookery.

At present there are 65 active clubs in Kansas with a membership of 700, and 3,000 girls have been reached by the organization. A good many clubs continue through the several courses, and through them many rural and other schools have been helped and regular departments have been installed in many high schools. These clubs form one of four methods employed by the Kansas college to reach nonresident students, the others being the correspondence courses in cooking and sewing, movable schools in cooking and sewing, and special courses in home economics for women's clubs already organized. (See p. 97.)

Exhibits of club work.—It has become customary to arrange exhibits of the results of club work at local, county, and State fairs as a means of increasing interest. Often such exhibits are held first in each district school; then winning exhibits are sent to county contests, and county winners to State contests. In some instances instruction is provided in connection with the exhibits, and so a school of domestic economy may be maintained during the exhibition. A striking instance of this is the Illinois State fair with its model house for domestic science instruction, provided at a cost of $20,000, in which domestic science instruction is given during the fair. (For exhibits, see further, p. 174.)

III. THE ELEMENTARY SCHOOL AND EDUCATION FOR THE HOME.

This chapter presents, in the earlier sections, selected typical curricula to indicate the character of instruction in household arts given in the elementary school, and in the later sections statistical discussions of certain aspects of the elementary school situation based on returns from a schedule of inquiry sent to city schools.

Section 1. HOUSEHOLD ARTS IN LOWER ELEMENTARY GRADES—SPEYER SCHOOL OF TEACHERS COLLEGE.

One solution of the household-arts problem in the lower elementary grades is that of the Speyer School of Teachers College, Columbia University, in which a single combined subject of "industrial and fine arts" (household arts, industrial arts, manual training, and fine arts combined) is introduced in the first six grades, with appropriate units from each of these aspects and with no differentiation of work for boys and girls. In its organization the material groups itself about man's needs in six particulars—foods; shelter; clothing; records; utensils; tools, machines, and weapons.

> The work under each is divided into subject matter and projects. Projects are illustrative of processes of manufacture. Their design involves a careful study of the principles of design, an examination of designs used to-day, and a study of the designs used by historic peoples. Processes of construction involve not only hand production but a study of power machinery, factory production, and transportation. The social aspects of the subject include studies of sources of material, markets, the conditions of laborers, and the relation of employers and laborers and of these to consumers. Excursions form an essential part of the work.[1]

The advantages of the plan are these: A solution for the crowded curriculum by reducing art work and all manual work to a single unified subject, industrial and fine arts; a further simplification by providing uniform work for boys and girls; social gains by grounding the boys in some knowledge of the household, its arts and problems, and similarly by acquainting the girls with industrial materials, processes, and conditions; a consideration of the arts that is thoroughly and fundamentally humanistic, not technical and not vocational save in the sense of awakening and developing interests and capacities, and thus providing a basis for later vocational choice.

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[1] The Speyer School Curriculum, Teachers College, Columbia University, 1913, 179 pp., 50 cents.

For the seventh and eighth grades the work is differentiated to meet vocational needs of students, whether professional, industrial, household, or commercial—i. e., whether going on to higher professional training or planning to turn shortly into household, industrial, and commercial work. As to the work of the first six grades, a definite beginning in industrial and fine arts is made in the kindergarten to the extent of interpreting ideas and feelings through materials. In the first grade the work in social and industrial life constitutes the larger part of the year's work. There is no attempt to differentiate the several aspects; the unified life experience of the children in the basis. Topics considered are: The family—members; pleasures; activities; material needs, including food, clothing, and shelter. For example, as to food, the subject matter may include: "What we eat; how our needs are supplied; how mother preserves some kinds of fruit for winter use." There is practice in projects: Preserving of fruit for the day nursery; modeling fruits and vegetables from clay; making a fruit and vegetable stand of wood to represent grocer's display; brush work and paper cuttings of fruits and vegetables. Certain community activities related to the house are also studied.

In the second grade social and civic aspects rather than the industrial are emphasized; the problems of primitive people are considered in so far as they lead into the present; nature study, hygiene, and constructive activities are related to the study of social and industrial life.

The topics include:

In present-day life—A. Individual needs of food, clothing, and shelter related to nature study; for example, as to shelter: (1) Uses—protection from the weather, abode of the family group, protection for family property. (2) Kinds of homes—the house for one family, for several families, for many families; houses at the seaside and on the farm. (3) Materials used—wood, stone, bricks, cement, steel. (4) How we can help in our home—sweep, dust, set table, make beds, wash dishes. B. Community needs of city government for fire, police, health protection, etc. In primitive life—food of tree dwellers, early cave men, and later cave men; shelter, clothing, education.

The projects of the second grade include—

food, shelter, clothing, utensils, tools, sand-table projects; in shelter, for example, (1) making a simple house form with a frame of wood covered with burlap, containing a door and window, using celluloid for the window panes; the top or roof is left open; the parts are in panels and are easily folded; the wall of the schoolroom may be used as one side of the house. (2) Furniture for the house—table, chairs, buffet, bed, bureau, and bookcase, made in simple style of wood by screw construction; each piece is made by two or more children working together. (3) Housewifery, using the house and furniture made; (a) care of dining room—sweeping, dusting, setting table, washing dishes, laundering linen; (*b*) care of bedroom—sweeping, dusting, making bed, laundering linen.

In the third grade the correlation of the unified-arts work is sought in the history, which deals with hunting, fishing, pastoral, agricultural, and commercial stages, and in the geography and nature study. The industrial and fine-arts work includes foods, shelter, clothing, records, utensils, and tools, machines, and weapons. Foods as outlined include:

Subject matter: (1) Milk and milk products related to study of pastoral people; food value of milk as compared with other foods; care of milk—questions of sanitation; butter—food value, process of making, action of rennet; thickening of milk—with flour, egg, rennet, starch; whey and curds. (2) Indian foods in connection with history; dried foods—pumpkin, apples, and meat; uses of corn—mush, meal, hominy, parched corn; corn dance of the Indians. (3) Storage of fruits and vegetables for the winter; Indian methods compared with ours; marketing in New York. (4) Hebrew food in connection with history—unleavened bread, lentils; cleanliness relative to meat. (5) Food products of the eastern Mediterranean region. Olives—olive oil, food value, use in salads. Oranges, dates, figs.

Projects of third grade: (1) Butter, cottage cheese, custard, junket. (2) Dried pumpkin, dried apples, corn meal by mortar and pestle (made and used); corn-meal mush, hominy, parched corn. (3) Unleavened bread, lentil soup. (4) Salad, orange jelly, stuffed dates.

Grade 4 repeats in the arts work much the same correlation; with history, in which the children study the Greeks and Romans as types of civilized society; with geography, activities of peoples in other lands. The general arts subjects remain the same. The topic of foods includes the following:

Subject matter: (1) Eggs—food value as compared with milk, meat, vegetables, etc.; methods of preparing eggs; cold storage; candling, etc.; use in preparing other foods, as thickening milk, lightening batters, etc. (2) Starch—food value; test for starch, method of cooking starch, uses of rice as a food, preparation of vegetables, serving with white sauce. Macaroni—food value, manufacture, preparation for use. (3) Fish—food value; methods of preserving, canning, drying, etc.; preparation for food; oysters, cod, salmon, mackerel, etc. (4) Cocoa and chocolate—source, manufacture, food value, preparation for use. (5) Serving a luncheon—to give first idea of balancing a meal by proper selection of food values.

Projects of fourth grade: (1) Boiled eggs, deviled. (2) Rice cooked with cheese, vegetables served with white sauce, baked potato, macaroni and cheese. (3) Oyster soup, chowder. (4) Cocoa. (5) A luncheon.

Grades 5 and 6 repeat the general correlation suggested. The arts work is suggested by the food topics of grade 6:

Subject matter: (1) Doughs and batters, methods of preparing. (2) Methods of lightening doughs—by air in egg or folded pastry; by baking powder; by soda and sour milk; by yeast. (3) Dietaries—organizing the food values of various products studied so as to give basis for planning meals with approximate balance. (4) Fermentation—summary of previous studies; causes—yeast and bacteria; evidences; favorable conditions; methods of prevention—sterilization in canning, pasteurization of milk; uses of sour milk; useful fermentations—butter, cheese, bread, and vinegar. (5) Economics of food—substitutes for meats in food value; comparative cost of milk, eggs, meat, and vegetables; cooking left-overs; buying in season; buying in quantities. (6) Colonial cookery—brown bread, baked beans, Indian pudding, pickles, corn bread, etc. Dutch luncheon. (7) Tea, coffee, and cocoa—food value, hygienic questions. (8) By-products of foods—candle dipping, candle molds, soap making.

Projects of fifth and sixth grades: (1) and (2) Cake. (3) Menus. (4) Canning. (5) Left-over dishes. (6) Dutch luncheon of the Colonial period. (7) Soap, candles.

In grades 7 and 8 the curriculum is differentiated. The household arts, which up to this point has been of a general informational character, industrially and socially cultural, now becomes technical and vocational, and is taken by the girls alone, while the boys take similar specialized work in industrial arts.

Section 2. UPPER-GRADE INDUSTRIAL COURSE—CHICAGO PUBLIC SCHOOLS.

An industrial course in household arts has been outlined for grades 6, 7, and 8 of the Chicago public schools, the intent being to emphasize the vocational aspects of household arts. The principals are authorized to substitute the industrial course for the regular course in these grades where the conditions make it appear advisable. Pupils who complete either the general or industrial course are admitted to high schools without prejudice.

The schedule for the industrial course provides 25 hours of instruction per week, of which 8⅓ hours are devoted to English, history, civics, mathematics, geography, and penmanship; 5$\frac{5}{12}$ hours to physical education, music, study, general use, and recesses; and 11¼ hours to art, nature study, and industrial arts.

The industrial course in household arts is outlined as follows:[1]

SIXTH GRADE.

Household science three times a week (two hours); the kitchen; method in kitchen arrangement; in dishwashing; the range, its care and control; the ice box, its structure and care; vegetables, their structure and value; cereals, at least four, with and without fruit; eggs, in at least five ways; milk and eggs in combination; butter making and comparison of butter with substitutes; milk, at least five ways of using as the principal ingredient; flour mixtures, batter and doughs; meat, structure and methods in cooking; beverages, cocoa, chocolate, coffee, tea.

Infant diet; the responsibility of citizens, including children, for the cleanliness and beauty of home yards, of alleys, and streets; the school premises as a center of influence; the inspection of milk, meats, fish, fruits, and other supplies.

Food storage in plants; experiments with plant foods; animal foods; simple experiments in digestion; amount of water in foodstuffs.

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[1] Chicago Public Schools' Course of Study for Elementary Schools, 1912, pp. 85–87.

Sewing two times a week: Hand towel, sewing apron, sewing bag, pillow slip, crocheting (lace), knitting (lace), corset cover, damask hem, hemstitched collars, cuffs, and doily. All pieces to be carefully laundered.

Study (and culture, if possible) of flax, hemp, and cotton. Study of wool, washing, carding, spinning, and weaving. Comparison of various fibers; testing with chemicals and microscope.

SEVENTH GRADE.

Household science, two times a week: Preservation of fruit; flour mixtures, general principles controlling them; specific and general rules; study and general understanding of leavens; experimentation with yeast; deep-fat frying; meats, experiments for understanding various conditions of solubility and coagulability of muscle juice; methods of cooking reviewed and practiced; judgment of fish, methods of cooking; soup stocks; salads, salad dressings; combinations of fruits and greens; desserts, economical puddings, and frozen desserts.

Laundry work: Washing and ironing towels, table linen, and simple garments; study of various bluings; making of soap; starching simple articles.

Housewifery: Sweeping, dusting, cleaning; care of linen, furs, and woolens; disinfection, prevention of vermin; emergency nursing, prompt aid in accidents; sickroom arrangement; personal and household hygiene; some understanding of municipal housekeeping.

Experimental study of bacteria, yeasts, and molds in relation to man's food and health; preservation of food by drying, heating, sweetening, pickling, and freezing; vinegar from cider, sour milk from sweet milk.

Simple experimental study of the effects of heat; expansion of liquids, gases, and solids; explanation of common applications; of the freezing and thawing of a vessel full of water, noting effects. Change of state; liquids from solids, melting; gases from liquids, evaporation; liquids from gases, condensation; solids from liquids, freezing; the study and explanation of common applications; making and using simple distillation apparatus; chemical change as illustrated in charring wood, bone, or food.

Sewing, three times a week: Machine practice, dish towels, gingham apron (salable), kimono dress or Russian blouse (4-year-old child, salable), nightdress, petticoat, gymnasium suit (salable), weaving.

Sewing, beginning with seventh week and continuing remainder of the year, three times a week, except for the spring millinery: Thin dresses; waists of various kinds and any garment in vogue possible to skill of pupils.

Embroidery.

Millinery, three times a week for six weeks and three times a week beginning middle of March, eight weeks.

EIGHTH GRADE.

Household science, once a week for whole year: Work in large quantities and training in waitress work; simple experimental studies of liquids—the tendency of liquids to seek their level, illustrated by water in communicating vessels and in water gauges on steam boilers; water pressure due to height of column; application in standpipes and water-tank systems; pressure transmitted through liquids; application in force pump, pumping stations, circulation of the blood in man and animals; simple hot-water circulation apparatus.

Arithmetic problems related to household arts.—In the outline of mathematics for the sixth to eighth grades of the industrial course for the Chicago public schools there is included a list of arithmetic problems "to be considered as the necessity arises in actual industrial work, rather than taught in whole or in part as a preparation for the future."[1] The list suggests the type of correlated instruction which can be undertaken by the regular classroom teacher without the aid of special teachers. It is as follows:

Denominate numbers in avoirdupois, liquid, dry, and linear measure. New tables made for the capacities of spoons (table and tea), cup, and weight of same. Interchange of dry and liquid standards with their corresponding weights. Reduction of recipes from standard to enough for two or for the whole room. Inventories of the room with probable cost and consequent value. Computation of lesson costs per class, per individual. Wholesale and retail prices of material. Cost on the farm and at the store. Budget and apportionment. Wages and percentage of value of purchased articles. Comparison of cost of gas, oil, electricity. Reading of meters, gas and electric. Significance of a kilowatt hour. Percentage discount for prompt payment. Solutions—Medical, laundry, cookery. Insurance—House, life, accident, industrial. Exchange on foreign money (especially where population is largely immigrant). Weighing all packages in kitchen and keeping written records. Comparison of costs of meats and their substitutes (cheese and chops, beans and steak, etc.). Capacity—Hot-water boiler, oil can, oil tanks, kettles, pails, baskets, coal bin, coal scuttle, ice box, size and consequent weight of ice, jars, air capacity of room, window boxes (amount of earth), bushels, barrels, pounds, cubic inches, gallons, quarts, cups (all interchangeable in sensible relations). Expansion of gases (cooking). Simple plane geometry, drafting of garments, amount required for need, measurements, allowances, etc. Familiar and accurate use of linear measure. Correct and rapid visualization of measurements. Perimeter, diameters, areas. Floors—Wood, paint, covering. Walls—Paper or other covering. Tiling—Various appropriate places. Bills, receipts, bank account, interest. Bonds, their significance and operation. Cost of cleaning street and vicinity, and cost of lighting the vicinity. Ratios in every possible connection. Foreign wage and cost of living (especially immigrant communities, data obtained by pupils) compared with American wage and cost of living. Cost of bread, at baker's and cooked at home (fuel considered). Various standard widths of common textile materials considered in terms of cost of garment as width varies.

Section 3. UPPER GRADES—VOCATIONAL SCHOOL FOR GIRLS, ROCHESTER, N. Y.

The vocational classes and schools for girls in the Rochester (N. Y.) public schools aim to hold in school sixth, seventh, and eighth grade girls who would ordinarily drop out to go to work; to try them out in handwork, plain sewing, dressmaking, millinery, cooking, and design, leading toward a trade; and, in the vocational school, to give two-year vocational or trade courses in dressmaking, in millinery, and in lunch-room management, and a similar vocational course for homemaking called "the household arts course."

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[1] Chicago Public Schools. Course of Study for the Elementary Schools, 1912, pp. 81–83.

There are two departments:

I. An elementary department open to girls 14 years of age who have completed at least sixth grade A, and requiring two years for such girls and one year for seventh grade A girls. In this elementary industrial department, of 35 hours per week of teaching, 8 hours are given to sewing, 3½ to cooking, and 3½ to drawing—household arts and drawing being given therefore nearly one-half the time.

II. The advanced department. This is a two-year curriculum with the first year devoted to a general course. Of the 35 hours a week in the first year, 8 are given to sewing, 4 to cooking, and 4 to applied design. The second year is a period of four specialized courses: (1) Dressmaking; (2) millinery—each offering preparation for trade under trade teachers, but including in the curriculum three hours of cooking which has reference to the potential vocation of homemaking; (3) lunch-room management course, preparing for wage-earning work in school or other lunch rooms, or for more intensive food work for home use; (4) the household-arts course, aimed directly and solely at homemaking.

One must note: (1) The place given household arts in every one of these varied vocational curricula in recognition of woman's universal vocation of homemaking, even where the individual prepares also for an industrial vocation (millinery or dressmaking): (2) the "lunch-room course," as offering preparation for a process, that of food preparation, which may be used outside the home, but skill in which is a great asset in the home; (3) "the household-arts course" as giving preparation for homemaking itself for the girl not drawn off into outside industry.

The lunch-room course has as its practice work the preparation of daily lunches for the teachers and pupils; with responsibility for marketing, accounts, menus, cooking, and service, and three hours a day assigned to these duties. The full weekly schedules follow:

Lunch-room management course.—English, 4 hours; general science, 4; sewing, 3; applied design, 3; cooking, 15; foods, 2; physical training, ½; music, ½; study, 3.

The household-arts course.—English, 4 hours; general science, 4; cooking, 4; household decoration, 4; sewing or millinery, 8; textiles or foods, 2; physical training, ½; music, ½; household economics, 4; study, 4.

Thus, in this new type of education, the vocational training of girls, preparation for home responsibilities by school instruction is made an element in every course, and a special curriculum for homemaking is provided. The cost of running the school for 1912 was $7,831.37, less $240.74 received from sales, or a cost of $76.67 per pupil.

Section 4. DATES OF INTRODUCTION OF HOUSEHOLD ARTS INTO PUBLIC SCHOOLS.

The date of the introduction of household arts into the schools was reported by 444 communities. Only 52 of these (11.7 per cent) had the subject before 1900; 56 introduced it between 1900 and 1904; 156 between 1905 and 1909; while in the three-year period, 1910–1912, the subject was introduced by 166 communities (39 per cent of those reporting). Another grouping of the same returns shows that almost exactly half the total number (213 communities) have added household arts to the school curriculum since 1909. Home education, therefore, as a country-wide movement, is a recent phenomenon; the number of introductions per year reached the maximum in 1911. Whether the fall to 48 in 1912 indicates that the crest of the wave has been reached can not be told. The report for 1913 is for part of the year only.

How has the movement for home economics in public schools progressed geographically? Up to and including 1895 the subject is reported as introduced into the following States only: Maine, Massachusetts, Connecticut, Rhode Island, New Jersey, Pennsylvania, Maryland, District of Columbia, Virginia, Ohio, and Wisconsin. By virtue of New York City, New York State might be added to this list. In subsequent years dates of introduction can be given for cities in all States except Arkansas, Nevada, New Mexico, Tennessee, and Wyoming, and home economics is taught in all these States for which exact dates of introduction are not reported. The development of the subject by successive years throughout the various States is indicated, approximately at least, in the annexed table.

There is printed in Part IV of this report (Bulletin, 1914, No. 39) a list, by States, of 3,082 cities and towns which were teaching home economics in 1914; and a list of 2,440 high schools teaching household arts. This list is not complete, and one may safely assume from it that household arts is taught in not less than 3,500 or more towns and cities, and in probably 3,000 high schools, in 1914.

TABLE 2.—*Year of introduction of household arts into city public schools, by States.*

[Figures refer to separate communities.]

	1895 or before.	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913 [1]	Total.
Alabama																	2			2
Arizona									1				2	1						4
Arkansas																				
California				1	1	1					1		3	1	3	1	1	1		14
Colorado										1		1			2	1	3			8
Connecticut	[2] 1	2								1		1			3	2	2	1	1	13
Delaware																				
District of Columbia	[3] 1																			1
Florida																1				1
Georgia				1					1	1										3
Idaho															1	1				2
Illinois							1	1	2	3	2	5	4	2	2	4	5	3		34
Indiana										1		1	3	4	5	2	2	3	1	22
Iowa									2			1		2	3	3	4	4		19
Kansas				1					1	2		3		1	1	1			1	11
Kentucky																2	1			3
Louisiana																		1	1	2
Maine	[4] 1					1						1		1	1			1		6
Maryland	[5] 1															1				2
Massachusetts	[6] 8			2		2	1	2	1	2	2	1	6	4	2	3	8	2		46
Michigan			1		3	1	1		3	2	1	1	1	1	2	4	3	1		25
Minnesota	[2] 1								1					2	2	6	1	1		14
Mississippi															1		1			2
Missouri			1	1				1			1	1		1	1	1	1	1	1	11
Montana															2	2	1	1		6
Nebraska													2				3	1		6
Nevada																				
New Hampshire							1									1	1	1		4
New Jersey	[7] 6		1	1			2	1	1			2	1	2	2	3	2		2	27
New Mexico																				
New York		1	2	1		2		1	1	1	3	1	1	3	4	3	5	4		33
North Carolina															2					2
North Dakota													1			3		1		5
Ohio	[8] 2		1	1							2		2	4	2		1	4		19
Oklahoma											1		1			1		2	2	7
Oregon										1				1			3	1	1	7
Pennsylvania	[9] 2					2				1	3		1	1	1	2	4	5	2	24
Rhode Island	[10] 2																	2		4

[1] Part only of year.
[2] 1890.
[3] 1888.
[4] 1894.
[5] 1892.
[6] 1836, 1880, 1883, 1885, 1890, 1893, 1894.
[7] 1887, 1888, 1895.
[8] 1882, 1887.
[9] 1880.
[10] 1890, 1893.

TABLE 2.—*Year of introduction of household arts into city public schools, by States*—Continued.

	1895 or before.	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	Total.
South Carolina						1						1		1	1		1			5
South Dakota												1					1	1		3
Tennessee																				
Texas												2	1	1	1	2	2	2	1	12
Utah													1				1			2
Vermont															1	1	2	1		5
Virginia	1											1	1			1				4
Washington						1						2		1			1			5
West Virginia																	1	1		2
Wisconsin	[1] 1	1	1	1		1			1	1				2	2	2	1	2	1	17
Wyoming																				
United States	[2] 27	4	7	10	4	12	6	6	15	17	16	26	31	36	47	54	64	48	14	444

[1] 1892.

[2] 21 previous to 1895.

Section 5. TOPICS TREATED IN ELEMENTARY HOUSEHOLD-ARTS CURRICULUM.

Returns from 388 schools as to the topics taught in the elementary grades under "household arts," "cooking," "sewing," "domestic science and art," and other titles applied to education for the home exhibit the following facts:

TABLE 3.—*Topics taught in elementary curriculum.*

	Schools.		Schools.
Food principles	271	First aid	72
Planning menus	253	Home nursing	42
Serving meals	250	Care of children	37
Practical cooking	279	Plain sewing	388
Marketing	161	Dressmaking	194
Household management	145	Millinery	32
Household accounts	107	Judgment of textiles	185
Housework, housewifery	169	Art in relation to dress	183
Laundry	91	Household decoration	99
Sanitation	163		

In addition, the following topics are taught by one or more schools: Preparing lunches, serving lunches, food production and manufacture, kitchen and flower gardening, food physiology, cooking for the sick, cost of foods, knitting and crocheting, embroidery, raffia and reed work, weaving, braiding, cardboard winding, dyeing, pattern making, cutting and repairing of clothing, basket making.

It is noteworthy that in the case of foods the theoretical aspects, as "food principles," "planning of menus," appear as frequently in these elementary school programs as do "practical cooking" and "table service."

The comprehensive subjects of "household management" and "sanitation" and their practical aspect, "housewifery or housework," appear with approximately two-thirds the frequency of "cookery"; the topics "first aid," "home nursing," and "care of children" are not very generally taught.

In subjects relating to clothing, "plain sewing" appears most frequently. The next most common topic is "practical cookery." "Dressmaking" is just one-half as commonly taught as is "plain sewing," and "millinery" one-twelfth. The theoretical aspects of clothing, the training of judgment in regard to textile values, and the development of the artistic sense in regard to costume are stressed less than the theoretical aspects of foods, appearing in less than one-half the schools. Progress is needed here, for, after all, the woman of to-day needs training in buying clothing as well as in its making. Art in decoration and furnishing fares even less well than "art and costume," and appears in only one-half as many schools, i. e., in one-fourth as many as teach plain sewing and one-third as many as teach plain cooking.

No attempt was made to canvass social teaching regarding the family, and there was no suggestion of this topic in the data furnished; yet here is a topic by means of which the elementary school must do its part in strengthening family life. Its teaching will doubtless be only incidental to the household-arts program, although it is an important part of the ethical teaching which the elementary school must undertake.

Section 6. ORDER OF INTRODUCTION OF HOUSEHOLD ARTS INTO SCHOOL SYSTEMS.

The elementary school welcomed household arts as a subject of instruction earlier than did the high school. (Table 4.) Of 403 communities reporting the date of introducing household arts into the school curriculum, in 145 household arts had been introduced in the elementary schools alone; in 92, introduction had been made into the elementary schools, followed by introduction into the high schools; in 24, introduction had been into high school alone; and in 29, into the high school, followed by introduction into elementary schools; in 113, the subject had been introduced simultaneously into elementary and high school. Therefore, in 237 cases, introduction was first into elementary schools, in 53 cases first into high school, and in 113 cases simultaneously throughout the lower and higher schools. This indicates that for a subject such as household arts there is a readier welcome in the elementary than in the high school; the initial introduction in the elementary school is approximately four times as frequent as in the high school; and approximately twice as frequent as the simultaneous introduction in elementary and high school. Such is the general order or sequence of introduction.

The same figures state another fact of importance, namely, the relative distribution of household arts at present in elementary and high school. In 36 per cent of the communities (145 reported) direct education for the home is restricted to the elementary grades; in 6 per cent of the communities (24 reported) it is restricted to the high school; while in 58 per cent of the communities (234 reported) it has a place in both elementary and high school. The tendency is doubtless for the subject, if given at all, to be given in both elementary and high school: and if started in elementary or high school alone to be added in the other, although there is a noticeable tendency to give it in the elementary school alone. These figures are probably acceptable as to the relative distribution of instruction, but they do not indicate at all the total distribution in elementary and high schools.

Of 390 communities furnishing data as to the elementary-school curriculum, 7 (2 per cent) offer cookery alone, and 165 (42 per cent) offer sewing alone, while 218 (56 per cent) offer both cookery and sewing. There is thus indicated a tendency to offer both subjects in the elementary school, while, if but one is offered, sewing is the favorite subject 23 times as frequently as cookery. Sewing is doubtless chosen because of its ease and economy of introduction. Little equipment is required for sewing, and the regular teacher often gives the instruction. The tendency to include both subjects and to favor sewing rather than cookery in the elementary school is also shown in the sequence or order of introducing sewing and cookery. Of 390 cases, 134 introduced cookery and sewing simultaneously; in 7 cases cookery alone has been introduced; and in 24 cases cookery, first introduced, has been followed by sewing; in 165 cases sewing alone has been introduced; and in 60 cases sewing, first introduced, has been followed by cookery; i. e., if cookery was first introduced there has been a chance of 3.4 to 1 that sewing would be added, while if sewing was first introduced there has been a chance of only 0.36 to 1 that cookery would be added.

TABLE 4.—*Order of precedence in introduction of household arts into public schools.*

A. ORDER AS REGARDS GRADE OF SCHOOL.

(Reported from 403 communities for 379 elementary and 258 high schools.)

Point introduced.	Schools so reporting.
1. Introduced into elementary school; not yet into high school	145
2. Introduced into high school; not yet into elementary school	24
3. Introduced into high school first; subsequently into elementary school	29
4. Introduced into elementary school first; subsequently into high school	92
5. First introduced into elementary school (1 and 4 combined)	237
6. First introduced into high school (2 and 3 combined)	53
7. Introduced simultaneously into high and elementary schools	113

B. ORDER AS REGARDS CHARACTER OF INSTRUCTION INTRODUCED INTO ELEMENTARY SCHOOLS.

(Reported from 225 elementary schools teaching cooking and 383 elementary schools teaching sewing.)

Subject introduced.	Schools introducing.
1. Cooking alone introduced; sewing not yet taught	7
2. Sewing alone introduced; cooking not yet taught	165
3. Cooking introduced first; sewing subsequently	24
4. Sewing introduced first; cooking subsequently	60
5. Cooking first introduced (1 and 3 combined)	31
6. Sewing first introduced (2 and 4 combined)	225
7. Cooking and sewing introduced simultaneously	134

Section 7. TIME ALLOTTED HOUSEHOLD ARTS IN ELEMENTARY SCHOOL.

It is now possible to state the general practice of American schools with regard to the time allotted to instruction in the two usual divisions of household arts, cooking and sewing, throughout the different grades of the elementary school. (Table 5, A, B.)

First of all, the placing of these subjects by grades is important. Sewing is reported as follows: First grade, 20 schools; second grade, 25 schools; third grade, 45 schools; fourth grade, 82 schools; fifth grade, 236 schools; sixth grade, 345 schools; seventh grade, 377 schools; eighth grade, 316 schools. In other words, while sewing has been taught in all eight grades, it has been most commonly placed in the four upper grades, and of these more often in the sixth and seventh grades than in the fifth and eighth grades. Cooking is reported by no schools as taught in the first grade; in the grades thereafter as follows: Second grade, 1 school; third grade, 2 schools; fourth grade, 6 schools; fifth grade, 15 schools; sixth grade, 48 schools; seventh grade, 174 schools; eighth grade, 242 schools. Cooking is therefore confined practically to grades fifth to eighth, inclusive, and has been placed especially in the seventh and eighth grades.

A searching question that every community should ask is, Are these essential arts of living so placed in the elementary grades that they will reach the largest possible number of girls? In view of the fact that so many girls leave school in the sixth, seventh, and eighth grades, it is poor policy to place cookery, which is obviously the most essential of any of the arts of living, so late in the grades that large numbers of girls never have a chance to learn it. Until it is possible to advance the school age or hold girls longer in school, a practical and comprehensive course in cooking should probably be placed in the sixth grade in most communities, with a return to such instruction in the eighth or last grade of the elementary school.

In considering the amount of time allotted for household-arts instruction in the grades, the school week may be considered as providing 1,500 minutes of instruction. Our data will present the minutes per week allowed for cooking and sewing in the various grades. While Table 5 gives the full statement of facts, some of the comparisons are noteworthy here. The instruction in cooking is generally allotted 90 minutes a week in all grades when taught. This period appears both as the median time allotment in each grade and as the most common mode in every grade. Fifty per cent of the schools in each grade, also, either give 90 minutes per week to this teaching or not less than 75 nor more than 120 minutes per week.

Ninety minutes per week for instruction in cooking in the grades may be taken therefore as the usual time allowance for the food arts in elementary schools in the United States.

Sewing in the grades tends to be given a slightly increasing period as children proceed to higher grades; expressed by the median time allotment, sewing is given 40 to 45 minutes in the first grade, 45 minutes in the second and third grades, 60 minutes in the fourth, fifth, and sixth grades, 75 minutes in the seventh grade, and 75 to 80 minutes in the eighth grade. This is in contrast with cooking, which, wherever given, tends to secure a level mean time allotment of 90 minutes a week throughout the different grades.

The modes in the distribution of sewing time allotments also indicate an increase in the amount of time given; as much as 30, 45, or even 60 minutes a week is common in the first four grades; 60 and 90 minutes in the fifth, sixth, and seventh grades; and 60, 90, and 120 minutes in the eighth grade. "Half the schools" change similarly from 30 to 60 minutes for lower grades to 60 to 90 minutes for upper grades. While the median time allotment increases from 40 to 80 minutes as one passes from the first to the eighth grade, the maximum allotment increases from 100 minutes in the first and second grades to 140 minutes in the third, 180 minutes in the fourth grade, 450 minutes in the fifth grade, 225 minutes in the sixth grade, and 600 minutes in the seventh and eighth grades. In terms of the various measures, therefore, sewing instruction tends to secure a lengthened time allotment in the higher grades.

The question of the entire time allotted to household arts in the grades is perhaps more important. (Table 6.) As a basis of comparison it is possible to take the unit suggested above of 1,500 minutes per week extended through eight grades, or 12,000 week-minutes for the total time involved in eight grades of teaching. Examining the time allotments of 468 schools, the mean total time allotment for household arts for eight grades is 230 to 240 week-minutes out of the total of 12,000 week-minutes of instruction, or 2 per cent of the total time spent by the elementary school child upon all studies. The most common time allotments (modes) are 120, 180, 240, and 360 week-minutes of teaching; and 50 per cent of the schools allot between 150 and 360 week-minutes for the eight grades. The maximum time allotted to household arts in any elementary school is 1,200 week-minutes for sewing in all eight grades, and 1,350 week-minutes similarly for cooking, or 10 per cent and 11 per cent, respectively, of the total school time.

TABLE 5.—*Time allotments in elementary schools, in minutes per week.*

(*A*) FOR SEWING IN VARIOUS GRADES—GENERAL TENDENCIES.

No. of grade.	Schools reporting instruction in grade.	Shortest time and longest time reported for grade.	Median number of minutes reported for grade.	Minutes taken as limits to include half the schools.	Modal, or most frequently reported times for grade.
		Minutes.	*Minutes.*	*Minutes.*	*Minutes.*
1.......	20	20. 100	40-45	[1] 30-60	30. 60
2.......	25	20. 100	45	[2] 30-60	30, 60
3.......	45	20. 140	45	[2] 40-60	30, 40. 45, 60
4.......	82	25. 180	60	[2] 45-60	30, 45, 60
5.......	236	25. 450	60	[3] 45-60	40. 45. 60. 90
6.......	345	25. 225	60	[2] 60-90	40, 45, 60, 75. 80, 90
7.......	377	25, 600	75	[2] 60-90	60, 90
8.......	316	30, 600	75-80	[2] 60-90	60, 75, 80, 90, 120

(*B*) FOR COOKING IN VARIOUS GRADES—GENERAL TENDENCIES.

1.......	0	....	....	....	....
2.......	1	90	90	90	90
3.......	2	90	90	90	90
4.......	6	60. 225	90	90	90
5.......	15	60. 450	90	[3] 90	90
6.......	48	30, 450	90	75-120	60, 80, 90, 120
7.......	174	30, 600	90	80-120	60, 80, 90
8.......	242	30, 450	90	80-120	60, 80, 90, 120

[1] Includes 75 per cent. [2] Includes 50 per cent. [3] Includes 46 per cent.

TABLE 6.—*Total minutes per week in all grades combined for sewing and cooking—General tendencies.*

(Comparable with 12,000 total minutes per week for complete school program).[1]

Branch of household arts.	Number of cities reporting in elementary grades.	Smallest and largest total minutes reported by any city.	Mean total minutes reported for cities.	Total minutes taken as limits to include half the cities.	Modal, or most frequent, total minutes reported.
Sewing...	468	30, 1200	230-240	150-360	120, 180, 240, 360
Cooking..	266	45, 1350	180	120-210	90, 120, 160, 180, 240, 360

[1] This measure is computed on the basis of the minutes allotted per week in the various 8 grades, summed to give total minutes per week for all grades; the standard of camparison for a full program of all subjects is taken as 300 minutes per day or 1,500 minutes per week for each of the 8 grades, i. e., 12,000 total minutes per week for all school subjects through all grades.

Section 8. AIM OF HOUSEHOLD-ARTS TEACHING IN THE GRADES.

One hundred and eighty-three schools furnish a brief statement of their aims in teaching household arts in the elementary school. Some replies stated a single aim; others more than one aim. Three schools state the aim in terms of the school itself: "To broaden the curriculum"; "to prepare for high school"; and "to make the school of use in the home and make school work more practical." Three other schools justify household-arts teaching from the point of view of the child, "to make the pupil able to serve her own needs"; "to give children what they need"; and "to interest children."

Some 32 phrase their aim in the view of education as a discipline, using such terms as the following (the numbers indicating the frequency of use): "Neatness" (4), "accuracy" (3), "cleanness" (2), "culture" (2), "general training" (2), "intellectual training" (2), "character building" (2), "practical and educational" (2), "all-round development," "self-development," "educational," "broader view," "practical and disciplinary," "training," "get the means of acquiring knowledge," "lay foundation for future development," "develop initiative," "give ability and confidence," and, finally, "make action depend on thought." While these statements of disciplinary aims in household-arts teaching may not meet the approval of the latest educational thought, they are highly significant and hopeful in a broader way—they indicate that so new a subject as household arts quickly amalgamates with the general school curriculum and easily finds its place in the general organization of the school and its justification and support in the educational thought there current.[1]

Household arts came into the schools originally in connection with manual training; one would expect, therefore, to find aims in household arts teaching stated in terms of manual training. Only 18 schools, however, directly suggest such an explanation: "Hand teaching" is given as the aim by 6 elementary schools, and "skill" by 5, while "technique" and "the development of mind through the hand" are each mentioned by 2 schools, and "training eye, hand, and judgment," "manual training," and "speed" are each mentioned by 1 school. Limiting manual training strictly to an intellectual betterment achieved by a manual method, one would even exclude from this list the aims of "skill" and "technique," which really belong to that latest educational purpose, the practical arts or vocational education which would fit youth for definite tasks.

Household-arts study in elementary schools, as of significance in the practical work of the home, is distinctly recognized in the statements of aim in teaching by two-thirds of the 183 schools furnishing data. In 61 cases reference is made to the practical nature of the subject matter, in 10 cases to the theory underlying the household arts, and in 53 cases to the application of these arts in homemaking and housekeeping. In 19 cases the aim emphasizes "practical" instruction, education, and knowledge ("utility"); in 37 cases a specific art is mentioned, "cooking," "sewing," "mending," "plain sewing," "drafting," "making garments," "home work and housewifery," "do own sewing," "judging textiles," "practical arts," "sewing as an industry," and (delightful to contemplate) "to prepare and serve a good meal"; while two statements add to practical skill, "a knowledge of sufficient theory." Ten schools emphasize this theoretical basis of the household arts by specifying some division of it as "food principles," "balanced rations," "the how and why," or by a succinct reference to "the science underlying the proper performance of household labor."

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[1] Or, viewed otherwise, the new subject is submerged in the school. For a discussion of the reaction of the general school situation on the avowed aims of domestic science, manual training, etc., see "Social Factors Affecting Special Supervision in the Public Schools of the United States," Walter L. Jessup, 1911, pp. 51–63.

Three schools speak of the "vocational" aspects, or preparation for a life work throughout household arts, and some 53 schools make distinct and interesting references to the relation of household-arts teaching to the home. Eleven refer to the preparation afforded for "homemaking" or "better homemakers," 11 others to household arts as "fitting for home," and 6, by the phrase education or training "for home life," suggest that a comprehensive view has been gained of the home as a social institution (perhaps the most important need in household-arts teaching today). "Home efficiency" (term used by three schools), "use in home" (two), "better homes" (two), "aid homes" (one), "home improvement" (one), are all aims indicating a most significant policy of home progress and improved housekeeping as a result of household-arts teaching in the public schools, i. e., the school is to become an agency for the betterment of the home. The aim stated in one case—"to meet the needs of the average home"—need not be interpreted as indicating satisfaction with the present level of housekeeping; it is just the average home whose greatest "need" is improvement, not a training of its daughters merely to repeat its mistakes for the next generation. Three schools state the aim as "economy" or "reduction of home expenses"—an echo perhaps of the high cost of living.

Another important aim in household-arts teaching is recognized by the seven schools which specify "the development of an interest in household arts," "the dignifying of housework," "the giving of a right attitude." It is always one of the immediate fruits of technical or professional training that it remakes our mental picture of the task in hand, arouses new interests, and taps unexpected reservoirs of purpose and energy—and this not only for the individuals who take the technical training, but for all other persons, those who observe its results as well as those who participate in it. While we have here a psychological change primarily in the young women who in elementary schools or high schools take training in household science and art, we have a great social change going on in the significance of the home for them and for all of us. We are at the edge of the most searching problem in the aim of teaching household arts: What is its social meaning? The educational thought of to-day is emphasizing "practical arts" in education. Two-thirds of the schools, as we have just seen, recognize this in their statement of aim in household teachings, either by enumerating the useful arts and knowledge thereby imparted, or by urging that the theoretical background of these arts is worthy of study, or (in half the cases) by pointing out their application in the home. The social valuation of this teaching is, however, the final test—i. e., What is it worth to us all, as we live in families, in communities, in States, and in the human brotherhood, that the practical arts by which the household exists, and the ideals which hold it together, shall be made plain to the up-growing youth by regular instruction? The family and home, so far as we can see, are the sine qua non of humanity.

Rightly, then, the bearing of household arts on home making is emphasized by 53 schools. Twenty-eight schools recognize the social values in household-arts teaching from still other and significant viewpoints. Eight schools refer to it as furnishing preparation for life or adjustment to life, five note its economic significance in getting girls into a sympathetic understanding of the world of work, and two note its "economic utility," which may be interpreted as broadly as may be desired; and three the fact that it helps in "making pupils useful"; two see its wide bearing on "health," "hygiene," and "right living," which are coming more and more to be considered as social matters, while the practical nature of the social aim is here and there brought out—how it means "better and more reliable women," or, in quaint phrase, "getting the child headed right," so that, as another school says, "they may be fit for service—not become stuffed owls."

It would be easy to find fault with these several hundred informal statements of purpose in teaching household arts jotted down on a Government schedule by busy superintendents and supervisory teachers. Some are archaic, some contradictory, some whimsical—all inadequate. Thrown together, however, they supplement each other and present in a remarkable way the controlling ideas behind the teaching of household arts in our elementary schools. There is the development of mental abilities, the acquiring of manual skill, the learning of useful arts and their explanations, the application of these arts in the home, the relation of school and home to the progress of humanity. Household arts seem to be finding a rational place, therefore, in the program of the schools.

Aim in lower grades.—The question was asked whether the aim of household-arts teaching in the lower grades varies from that of the upper grades. From 12 schools (14 per cent) the reply was that it did vary; from 71 schools (86 per cent) that it did not. Differences in the teaching are said to be: In higher grades, attention to cost and food values; more involved technique; theoretical basis emphasized; fundamental aim the same, but approach varies. In lower grades, technical skill; manipulation. Several schools replied that there was not much difference.

Vocational aim in elementary school.—By 123 schools (85 per cent) it was stated that no vocational aim was taken into account in the elementary school teaching of household arts, while 22 schools (15 per cent) stated that such aim is operative. The replies are not without ambiguity, however, as "vocational" was interpreted in some instances as preparation for home making, in some as indicating wage earning only. In one city the vocational aim is stressed in colored schools. The Chicago and Rochester outlines of industrial work in the grades are given above (pp. 64, 66). Cambridge, Mass., has done prevocational work in household arts in the grades in dressmaking and millinery.

Special classes in the higher grades, with longer household-arts periods, might often be organized and valuable results secured to be applied later in the home or in certain industries. In general, however, home making and housework have been the only vocational aims in the elementary school.

Section 9. SPECIAL TEACHERS OF SEWING AND COOKERY IN ELEMENTARY SCHOOLS.

Of 402 elementary schools, 151 (37.5 per cent) report that the regular grade teacher gives the instruction in sewing, and 251 (62.5 per cent) report that special sewing teachers are employed. Of 287 elementary schools, 10 (3.4 per cent) report that the regular grade teachers give lessons in cookery, and 277 (96.6 per cent) report that special cooking teachers are employed. Stated otherwise, sewing is taught by the regular classroom teachers in over one-third of the schools, or ten times as frequently as cookery is taught by the regular class teacher. This is doubtless a leading influence in the earlier introduction of sewing. The distribution by States is shown in Table 7.

A. A SPECIAL BUILDING FOR HOUSEHOLD ARTS, HOLLYWOOD HIGH SCHOOL, LOS ANGELES, CAL.

B. LAUNDRY LABORATORY, WASHINGTON IRVING HIGH SCHOOL, NEW YORK, N.Y.

TABLE 7.—*Elementary school instruction in household arts.*

States.	In cooking, by—		In sewing, by—	
	Regular class teachers.	Special teachers.	Regular class teachers.	Special teachers.
Alabama		3	2	1
Arizona		3		4
California	1	12	7	6
Colorado		6		8
Connecticut		8	2	9
District of Columbia		1		1
Florida		1		1
Georgia		3		3
Idaho		1		1
Illinois	1	23	14	17
Indiana	2	11	15	9
Iowa		11	2	16
Kansas		4	3	6
Kentucky		1		1
Louisiana		2		2
Maine		6	2	5
Maryland		1		1
Massachusetts	1	24	16	31
Michigan	2	22	10	18
Minnesota		10	10	4
Missouri	1	5	4	5
Montana		2	3	2
Nebraska		2	2	1
New Hampshire	1	2	1	3
New Jersey		17	10	13
New York		24	11	20
North Carolina		2		2
North Dakota		4	5	
Ohio		13	5	11
Oklahoma		4	2	4
Oregon		3	2	3
Pennsylvania		12	3	18
Rhode Island		1	1	1
South Carolina		2		2
South Dakota		1	2	1
Texas		6	1	5
Utah			2	
Vermont	1	1	2	2
Virginia		2	1	2
Washington		5	3	1
West Virginia		1		1
Wisconsin		15	8	10
United States	10	277	151	251

Section 10. SALARIES OF SPECIAL TEACHERS OF HOUSEHOLD ARTS IN ELEMENTARY SCHOOLS.

In 273 elementary schools the salaries of special teachers of household arts varied from $150 (doubtless for part-time service) to $1,500. The median salary is $800, and 50 per cent of the schools pay between $650 and $1,000. The distribution of salaries, by amounts and States, is given in Table 8.[1]

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[1] Where a salary schedule is given as lying between a minimum and maximum, the maximum figure was used in the table. Amounts are grouped by fifties, i. e., $500–549 as $500, except in the first column and last two columns.

TABLE 8.—*Salaries of special teachers of household arts in elementary schools, by amounts and by States.*

	Below $400	$400	$450	$500	$550	$600	$650	$700	$750	$800	$850	$900	$950	$1,000	$1,050	$1,100	$1,150	$1,200	$1,250	$1,300	$1,350	$1,400	$1,500
Alabama	[1] 1											1				1							
Arizona												2		1									
Arkansas																							
California												1		3		2		4				3	
Colorado							1	1		1			1	2		1							
Connecticut							1			2				2									
Delaware																							
District of Columbia																1							
Florida																							
Georgia	[2] 1							2															
Idaho														1									
Illinois	[3] 1	1			1	1	3	5	2	1				1			1			1			
Indiana			1		2		2	2	1	1		3			1								
Iowa					3	1	2		1	1				1									
Kansas							3	1						1									
Kentucky										1													
Louisiana											1												
Maine						2	2																
Maryland										1													
Massachusetts	[4] 3	2		2	1	3	1	2	5	2	1	1	2	1									
Michigan						3	3	1	4	3				4		1							
Minnesota					2		1	1	1	1	1			2									
Mississippi																							
Missouri	[5] 1						4				1					1							
Montana														1				1					1
Nebraska							1	1						1									
Nevada																							
New Hampshire				1																			
New Jersey			2						2	1	3	2		2	1	2		2		1			
New Mexico																							
New York		1	1	2		2	1	4	4	4	1	1		4			1	1					
North Carolina			2																				
North Dakota							1			3													
Ohio			1			1	1		1	2	1	2		3				1					
Oklahoma							1		1									1					
Oregon										1		1		1									
Pennsylvania						2	2	1	1			3	1		1								
Rhode Island																							
South Carolina	[6] 1								1														
South Dakota																1							
Tennessee																							
Texas							2	1	1	2			1										
Utah													1										
Vermont																							
Virginia					1				1														
Washington										1	1	2		1				1					

West Virginia							1															
Wisconsin						1	4	1	1	2		2		2				1				
Wyoming																						
United States		4	7	5	10	16	37	23	27	30	10	21	6	34	3	10	2	12		2		3	1

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[1] $240.

[2] $305.

[3] $270.

[4] $150, $225, $240.

[5] $315.

[6] $300.

Section 11. COST OF HOUSEHOLD-ARTS SUPPLIES IN ELEMENTARY SCHOOLS.

Cost of sewing supplies.—The cost to the school per pupil per year for sewing lessons is reported by 163 schools as from two-tenths of 1 cent to $4. The median cost is 25 cents, and for 50 per cent of the schools the cost falls between 10 and 50 cents per pupil per year. This cost varies of course not only with the amount of instruction, but also with the amount of sewing materials supplied to the pupil by the school authorities. The most frequently reported costs are, in cents, 2, 5, 9, 10, 15, 20, 25, 30, 35, 50, and 100. The full distribution of costs as reported follows:

TABLE 9.—*Yearly cost for sewing in elementary schools.*

Cost.	Schools reporting.	Cost.	Schools reporting.	Cost.	Schools reporting.
$0. 002	1	$0. 14	2	$0. 53	1
. 003	2	. 15	6	. 60	3
. 005	2	. 16	2	. 70	1
. 01	4	. 17	1	. 75	4
. 015	2	. 175	1	. 80	3
. 02	6	. 18	1	. 81	1
. 025	1	. 19	1	. 90	1
. 03	2	. 20	8	1. 00	10
. 04	2	. 25	10	1. 15	1
. 05	5	. 26	1	1. 25	1
. 06	2	. 285	1	1. 50	3
. 07	1	. 30	8	1. 60	1
. 08	3	. 32	1	2. 00	4
. 09	5	. 35	5	2. 25	1
. 10	11	. 36	1	2. 50	1
. 105	1	. 40	4	3. 00	1
. 11	1	. 43	1	4. 00	1
. 125	1	. 50	19		

Cost of food per lesson in elementary cooking instruction.—The cost of food per pupil per lesson in the elementary school was reported by 182 schools and varied from one-half to 15 cents. The median cost is 2½ cents, and 50 per cent of the schools pay from 2 to 3 cents per pupil per lesson for food materials. The distribution of costs follows:

TABLE 10.—*Cost of food per lesson in schools reporting such cost.*

Cents.	Schools.	Cents.	Schools.	Cents.	Schools.
0. 5	1	2. 2	3	4. 2	1
. 7	1	2. 3	3	5. 0	6
. 8	1	2. 4	1	6. 0	7
1. 0	4	2. 5	21	7. 0	2
1. 1	1	2. 7	1	8. 0	2
1. 3	1	2. 9	1	10. 0	4
1. 4	1	3. 0	30	11. 0	1
1. 5	20	3. 25	1	12. 0	1
1. 7	7	3. 4	1	14. 0	1
1. 8	1	3. 5	3	14. 2	1
1. 9	1	3. 8	1	15. 0	1
2. 0	35	4. 0	12		

In comparing relative costs to the school board of food material (mean cost of 2½ cents per pupil per lesson) and textile materials (mean cost of 25 cents per pupil per year) the difference in time period considered is obvious. Assuming a school year of 35 weeks, more or less, the cost to the school board would be approximately $1 for each weekly cooking lesson given throughout the year, as compared with 25 cents a year for sewing supplies. In the latter case the cost of materials is often borne by the pupil or parents and may vary widely. The garments made, however, enter into the child's wardrobe and become of practical use.

IV. THE HIGH SCHOOL AND EDUCATION FOR THE HOME.

The American high school is both a college preparatory school and a finishing school. The pull of the college upon it has determined its curriculum in the past, and those students whose education was not to extend beyond the high school were formerly sent through a curriculum whose end point was the college. This is all changing, however, and the recognition that the high school must be the people's great vocational school, fitting for all lines of activity in the community—industrial, commercial, agricultural, household—has become the most fruitful principle in high-school organization. Not that our secondary education should be transformed into trade schools exclusively, but that alongside the college preparatory curriculum should be placed vocational curricula, each with its systematic cultural training as well as its definitely organized technical subjects leading to vocational efficiency in its appropriate field. Granted that nine-tenths of our young people who go into high schools are to go no further than the high school, what manner of course shall they pursue? The last word in education is to conserve all that there is of good in academic cultural training, but to add to it for every individual specialized preparation for some one useful vocation. This means, for our high schools, curricula that are combinations of academic and technical subjects, organized for definite end points of service, in the home and in outside employment.

The vocational dilemma of young women has been noted by many. On the one hand is the growing demand that they equip themselves as wage earners in some outside employment, and, on the other, their own interest in the vocation of homemaking and the social pressure that modern knowledge be applied in housekeeping. The average young woman must command two vocations, actual wage-earning and potential housekeeping. Shall she learn two vocations in high school?

At present the vocational adjustment for girls in high schools seems to be developing about as follows: Some young women choose outright an industrial or commercial course; in such cases there should be time allowed within it for a year or more of work in household science supplementary to vocational and academic subjects. Some will wish to choose as their vocation the industrial applications of household science and art in cookery, baking, catering, sewing, millinery, costume design, etc. While the full possibilities here are not yet developed, it is obvious that as far as wage-earning vocations can be based on the household arts, the young woman who chooses from this field will get a double educational value, for she will not only have a revenue-producing vocation which can be practiced in the market, but in the event of marriage she has a skill which is directly applicable in the household. A third group of high-school girls will not choose a wage-earning vocation, either commercial, industrial, or the vocations recently derived from the household, but will stand firmly by woman's traditional vocation of home-making. For these evidently a vocational course is needed in which homemaking is as adequately prepared for as commercial work in the commercial curriculum of the high school. Finally, there is the group of girls whose education is not to be completed in the high school, and who choose the college preparatory course. For these there is a double solution as regards training in the home arts—either to postpone all training in this field to the college level, or to provide one or more years of household science in the high school as part of the college preparatory course. Because of the uncertainty of human plans, even as to so compelling an ideal as the desire for a college education, it would be the part of wisdom to include a year or more of household science in the college preparatory high-school course, quite as in the vocational curricula other than that of homemaking.

There is evidently needed on the high-school level two types of home-arts training: First, an efficient vocational preparation in homemaking, which will equip a young woman to assume the management of her mother's home or later her own home; second, a training for wage-earning vocations, based originally on the household arts—cooking, catering, baking, sewing, millinery, dressmaking, laundering, nursing (preparatory to nurses' schools), costume design, etc. In these and in all vocational curricula in high schools, there is no thought of mere trade courses, but of combined academic-technical courses that broaden life while preparing for service in a limited field. In the vocational curricula that have no reference to the home, and in the college preparatory course, there should be provision among these broadening courses for one or more years of household science to give some preparation for women's potential profession of homemaker. These types of household courses for high schools are illustrated in some of the following sections. One observation may be made, namely, that the division of instruction into the subjects of "domestic science" (cookery) and "domestic art" (sewing) tends to obscure the vocational unit, which is either the general field, housework, or some division—as cooking or dressmaking.

The preliminary recommendations of the committee on household arts of the National Education Association commission on the reorganization of secondary education are: The teaching of cooking and sewing are to be required in the grades; but until so provided, noncredit make-up courses are to be given in the first year of high school for those who have not had work in the elementary school.

> In the high school the emphasis should be on the reasons for doing things, and the food work should be given largely from the point of view of applied science; and, in order that the girls may have some science to apply, it is desirable that a course in general science should precede the work in foods or be taken parallel with it. For this reason it seems better to put this course (foods) in the second year of the high school.

The committee recommends one unit of work in the grades and four in the high school; the latter to include a unit of clothing and of food each, a half unit of dressmaking and millinery, a half unit of house planning, decoration, furnishing, and sanitation, a half unit of textile study, and a half unit of dietetics. Three units (two in high school) are recommended as required work and two as elective. "Those who go no further than the high school, those who wish to specialize in household arts, and those who are planning to take up quite a different subject afterwards, are recommended to take the five units."[1]

High-school credit for elementary household arts.—So long as some students begin household science in high school without preliminary instruction in elementary school, such beginning work in high school should have high-school credit. This seems only fair, especially in a vocational subject. The suggestion of offering make-up courses in high school, to be taken without credit, similar to make-up noncredit courses in the colleges, seems questionable for high schools at least. An interesting precedent is that of the New York State high schools, which give credit for one-half the seventh and eighth grade cooking, sewing, and manual training, and ultimately may give full credit for this grade work.

Section 1. A DOMESTIC-SCIENCE COURSE IN A GENERAL HIGH SCHOOL—BROOKLINE, MASS.

The Brookline, Mass., four-year course in "domestic science" is given in a general high school which offers five types of courses: Classical, subclassical, general, technical, and business. There is also a domestic-arts course parallel to the domestic-science course. The domestic-science course, outlined below, had last year a registration of 75 out of 270 girls in the school. Girls may elect one or more years, but are encouraged to take the four years. The aim of the course is homemaking; a few girls in the course have gone to college, but the difficulty of securing recognition for home economics is a barrier. A little postgraduate work has been given, and the school has experimented with continuation teaching by a three-lecture course for housewives which was well attended. A practical arts high school has recently been established in Brookline with more pronounced vocational aim in home economics.

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[1] U. S. Bureau of Education, Bulletin, 1913, No. 41, p. 58.

Domestic science is defined as including "food and house sanitation and personal hygiene, studied with scientific methods for the purpose of developing efficient homemakers and useful citizens." Domestic science work extends through the four years in the high school, occupying four periods a week throughout the course. The topics, by years, are as follows:

First year.—Chemistry and the physics of heat—two periods a week: 1. Study of flames. 2. Thermometers. 3. Boiling point. 4. Freezing point. 5. Heat: production, sources, nature, effects, transference, measure. 6. Water: distillation, solvent power, hard and soft water. 7. Hydrogen; synthesis of water. 8. Study of air and its principal gases. 9. Carbon dioxide. 10. The common chemical elements present in food compounds. 11. Synthesis, typical acid and base. 12. Acids, bases, and salts in connection with food work. 13. Some organic compounds. Definition, sources, formation, and uses. 14. Five food essentials.

Food and its preparation—two periods per week: 1. Study of kitchen equipment. 2. Carbohydrates. Sugar cookery. Starchy vegetables. Cooking of sauces, soups, and purées. Batters and doughs. 3. Protein. Albumenoids, albumen of egg. Preparation of egg dishes; methods based on results of experiments. Myosin. Study of muscle. Cuts of meat. Principles of meat cookery. Preparation of meat dishes. Gelatinoids. Connective tissue, bones, etc. Gelatine dishes. Nitrogenous extractives. 4. Fats and oils. Salad dressings. Beef dripping. Frying. Sauteing. Desserts and cream. 5. Mineral matters. Physiological value and sources of mineral matters in food.

Second year.—*A.* Chemistry of cooking and cleaning. 1. Removal of dust and dirt. 3. Solvents for grease. 3. Soap and soap making. 4. Cleaning metallic surfaces. 5. Removal of spots and stains from wood. 6. Removal of spots and stains from fabrics. 7. Testing food for starch, sugar, fat, mineral matter, and protein. 8. Composition of the body, food essentials, sources of mineral matter, starch, sugar, and protein, comparative cost, foodstuffs. 9. Balancing menus. 10. Simple experiments in digestion.

B. Food and dietaries: 1. Chemical composition, food value, and cost of various foodstuffs. 2. Metric system. 3. Heat and measurements; heat and work; calorimeter. 4. Daily requirements as regards muscle-building and energy-furnishing material. Balancing. 5. Menus planned to meet requirements worked out. 6. Occupation, climate, age, etc., considered.

C. Marketing and food preparation. 1. Practical marketing lessons. 2. Preparation of seasonable menus. 3. The best meals for the least expenditure of time, strength, and material. 4. Food for children. 5. School lunches. 6. Table setting, decoration, and serving.

Third year.—*A.* House sanitation: 1. Situation and surrounding of the house. 2. Study of soil and building sites. 3. Location from practical and sanitary standpoints. 4. Plumbing materials, construction with plans, care, simple tests. 5. Ventilation, chemical air tests. 6. Heat. Various methods, charts, and heating appliances. 7. Lighting; coal and water gas, acetylene, kerosene, candle, electricity. 8. Study of the plumbing, heating, lighting, and ventilating systems in the high school and at home.

B. Convenient house plans: 1. Principles of mechanical and architectural drawing. 2. House plans and elevations. 3. Plans of the plumbing system.

C. History of home and art in the home: 1. Historical development of the house. 2. Modern American houses. Excursions. 3. Situation and surroundings. 4. Practical and artistical requirements. 5. Finishing, furnishing, and decorating, based on experiments with color.

Fourth year.—*A*. Bacteriology and household biology: I—1. The microscope and the history of bacteriology. 2. Yeast molds and bacteria. 3. Household applications of bacteriology. 4. Dust and its dangers. 5. The housefly and mosquito. 6. Analysis of air, water, and milk. 7. Fermentation from biological standpoint. 8. The modern theory of disease. 9. Antiseptics. Food preservatives and their effect upon human organism. II. The care of little children and food for little children. III. Home nursing, including the preparation of food for the sick; general diseases and disinfection. IV. Home treatment of simple accidents, cuts, sprains, scalds.

B. Economics: 1. Economic problems of the home. 2. Household expenditures. 3. Division of income. 4. Household accounts. 5. Relation of food to labor power. 6. Saving time, strength, and material in conducting household operations (scientific management). 7. Household industries from the ethical and from the economic standpoint.

C. Chemistry of food and cleaning: 1. Analysis of some compounds used in the household: Milk, olive oil, baking powder, washing powder, silver polish, bluings. 2. Bleaching and dyeing. 3. Test for adulterations and preservatives in milk, butter, cheese, salt fish, dried meats, coffee, spices, salad oil, etc. 4. Preparation of some chemicals in common use in the household.

The Brookline domestic science syllabus also includes a list of study topics suggested for the economics class, and for English themes. For economics: The consumption of wealth. Food and its relation to labor power. The housing of the poor and its relation to good citizenship. Municipal sanitary regulations. Expenditure versus saving. Division of income. Domestic service (as part of the general labor problem). The work of superintending a home compared with other economic operations. Child labor. Pure food. For English themes: How we furnish the house. The system of plumbing in the Brookline high school. The system of ventilation in the high school. The Brookline water supply. The milk supply. Care of milk on the farm and in the home. Yeast and its relation to bread making. Cost of food in relation to its nutritive value. Problems of sanitation on a country place. An electrically equipped house. Our heating plant. Choosing a location.

Section 2. DOMESTIC-ART COURSES—DOMESTIC CHEMISTRY: LOS ANGELES HIGH SCHOOLS.

A home-economics course is offered in each of the high schools of Los Angeles, the curriculum varying with the purpose of the particular school, whether general, manual training, or technical. The Hollywood High School has a special household-arts building, which provides unusual facilities for such instruction. The following courses are given in high schools, the precise offering varying in different schools: In domestic art—sewing, dressmaking, millinery, costume design, home furnishing and decoration; in domestic science—cooking, domestic nursing and a "special course on the home," including the house, its construction, sanitation and decoration, home economics, management, laundry. Details are furnished of the high-school courses in domestic art and of a course in domestic chemistry, the latter given in the chemistry department.

The outline of high-school work in domestic art (sewing) is here presented:[1]

The aim of this work is to develop appreciation for the artistic and appropriate in dress and in the furnishing and decoration of the home, good judgment in the purchasing of materials, and technical skill in the planning and construction of garments. Emphasis is placed on simplicity, economy, and artistic line and color combination. The work comprises a study of the textile fibers with relation to their growth and processes of manufacture into cloth, of the adulteration of fabrics, of the uses of different fabrics, of the planning and construction of garments, of the hygiene of clothing, of the care and repair of clothing; also a consideration of the interior decoration of the home from the standpoint of art and economy. The work is intended to meet three needs—home use; preparation for advanced study; the earning of a livelihood.

Each of the following courses requires five double periods a week—one for textile study and four for practical work:

Preliminary course.—Intended for all students who enter the high school lacking previous training in sewing and related subjects, and including mending, darning, patching, planning, and construction of undergarments from freehand draft and bought patterns; also elementary study of the textile fibers.

Course I. Sewing, in grades B9 and A9.

In B9: Practical work—including review of principles involved in the making of undergarments; pattern drafting; making of princess slip; child's dress or gingham dress, thin white dress; study of designs and materials suitable for same; with supplementary work, simple articles for home decoration done in color from student's own design made in the art department. Textile study—Growth and processes of manufacturing cotton and linen; collection of samples of materials suitable for use in articles made during the term; discussion of the economic and hygienic value of different cotton and linen materials.

In A9: Practical work—including designing and making of patterns in paper; making thin white waist or dress; making dress or suit of heavy material (not tailored coat); embroidering on linen, i. e., napkin, doily, etc.; principles of fitting emphasized; discussion of care and economic value of table linen; with supplementary work, any article in cotton or linen. Textile study—Growth and processes of manufacture of silk and wool; economic and hygienic values of same; collection of samples of standard materials suitable for various purposes.

Course II. Dressmaking, in grades B11 and A11.

In B11: Practical work—including continued study of pattern drafting and designing from plain foundation; crinoline modeling; making of wool dress or skirt; emphasis on method of sponging and pressing; tailored shirtwaist; with supplementary work, silk waist and option of five weeks of millinery. Textile study—Methods of identification of the various textile fibers; textile adulteration; cleansing of fabrics; careful study of the economics of dress and the right apportionment of the income.

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[1] Course of study for High and Intermediate Schools, Los Angeles. 1913–14, pp. 93 ff.

In A11: Practical work—simple afternoon or evening dress, illustrating the draping of soft materials; study of color combinations most effective in artificial light; methods of finishing linings; draping of heavy materials as illustrated in the making of simple evening wrap; with option of five weeks of millinery. Textile study—Continuation of B (see above).

Course III. Millinery: B. Practical work—designing and making of frames in buckram and willow; making of hats from foundation to trimming; making and placing of all kinds of trimming, i. e., bindings, facings, bows and rosettes, bandeaux, etc. This course includes also a study of design and color and of materials used in the making of both hand-made and factory-made hats; renovating and the use of old materials; use and care of ostrich and other feathers. A. Practical work—designing and making of wire frames; trimming of straw hats; making of shirred hats and children's hats; dyeing and pressing of old hats and renovating of trimmings. It is desirable for the student to make as many hats for others as possible and to study the adaptation of line and color in a hat to various types of faces. Use of old materials is encouraged.

Course IV. Costume sketching and design—the aim of this course is to develop creative power in the art of costume design. Practice is given in the application of the principles of harmony as expressed in line, in dark and light, and in color. The course includes sketching of costumes in pencil, charcoal, pen and ink, and in color; quick sketching; the making of designs for dress embroidery and for costumes which may be reproduced in materials in the domestic art department; a study of designs as found in lace, textiles, and embroidery; a short survey of the history of costume, including comparisons with present-day fashions. Individuality in dress is considered; cost and quality of materials estimated.

Course V. Home furnishing and decoration—this course takes up the problem of the decoration and furnishing of the entire house. It deals with color schemes, cost of materials, kinds of materials used, economic and artistic values, and estimates for specific problems; visits to decorating shops will be included.

The domestic chemistry course offered in the Los Angeles high schools is part of the home economics curricula. This one-year course is "designed especially for girls, and its purpose is to train them to be intelligent and efficient homemakers. To this end an effort is made to develop a scientific attitude which will enable them to judge intelligently of the merits of household articles and supplies independently of the claims of the manufacturers." It includes a semester's work in the third year, as follows: "A brief study of the principles of general inorganic chemistry with special reference to physical and chemical changes, the atmosphere, water, fuels, and illuminants. Emphasis is placed on those parts of the subject having direct application in the home." A second semester's work is given in the senior year as follows: "Simple chemistry, food constituents, food values, and relative costs; food adulterants; common poisons and their antidotes; soaps and cleaning compounds; examination and care of textiles; dyes and mordants."

Section 3. A CURRICULUM FOR GIRLS—DOMESTIC-SCIENCE SUBJECTS—VOCATIONAL TRAINING: EAST TECHNICAL HIGH SCHOOL, CLEVELAND.

The Cleveland East Technical High School prepares boys and girls for definite vocations; also for entrance to technical schools of college rank; and maintains continuation education for wage earners. In most classes, differing vocational purposes require separate classes for boys and girls, so that a boys' school and a girls' school are organized within one building. A daily schedule of nine 45-minute periods with technical work in double periods is provided, and the usual program is of three academic and two technical subjects.

The curriculum for girls includes the following subjects, arranged in 45-minute periods as follows:

First year.—English, 5 periods; mathematics, 5; botany and physiology, 5; cooking, 6; sewing, 4; applied arts, 6; physical training, 4 or 3; study, 10 or 11.

Second year.—English, 5; mathematics, 5; chemistry, 6; cooking, 4; sewing, 6; applied arts, 4; physical training, 4 or 3; study, 11 or 12.

Third year.—English, 5; history, 5; physics of German or French, 6 or 5; elective technical, 15; study, 14 or 15.

Fourth year.—Art history and civics, 5; science or German or French, 5; elective academic, 5; or elective technical, 10; elective technical, 15; study, 10 or 15. Physical training and sex hygiene are electives.

The domestic-science course has a threefold purpose—to prepare for practical housekeeping; to teach related theory as applied science; to teach institution cookery and kitchen management as trade subjects, so that students may be prepared for catering as a vocation. The technical subjects involving homemaking are taken as the basis of the course, and around these, other subjects are grouped. As girls meet separately in academic work, the academic subjects are correlated directly with the technical; training in domestic science is thus greatly strengthened by these other departments; and the academic training is by no means weakened by practical applications, but is made interesting and of practical benefit. Graduates of the course have in many cases gone to college.

The work as outlined in the syllabus follows:

First year.—General subject: Selection, preparation, and physiological uses of foods. Method—Laboratory work in cookery and food experimentation. The following outline is observed in presenting the work: Energy-giving or fuel foods—carbohydrates and fats. Energy-giving and body-building foods—protein. Body-regulating food—water. Body-regulating and body-building food—mineral matter. Body-stimulating materials—food adjuncts.

Since the required academic sciences for the first year are physiology and botany, the physiological uses of foods are emphasized in the experimental and theoretical work of the beginning domestic science. For work in cookery, foods are also grouped as to their functions in the body.

Included in this part of the course are food experiments from which a direct, definite application can be drawn as to the selection, preparation, and digestion of foods to be cooked. Recording in a notebook the purpose, method, result, and application of each food experiment is required, so that the accuracy attained in observing and recording results lays the foundation for the laboratory method of study and especially prepares for the study of applied chemistry, a second-year subject. To do the maximum of actual cooking, thereby making the subject interesting and practicable to freshmen students, and at the same time to develop the reasoning power through factors interesting and helpful to a housekeeper, directions for cooking foods are arranged somewhat as instructions for laboratory work of an established scientific subject. To directions or suggestions for preparing foods are added questions, answers to which (recorded in a notebook) require careful observation as to cause and effect of the given method, difference in results obtained by substituting one food material for another, comparison of different methods of cookery, economy of material and time, proportions of ingredients in recipes. In short, by using a recipe book as a laboratory manual, students acquire skill in practical cookery and at the same time mental development in reasoning and logical thinking.

The "meal method" of teaching, somewhat modified, is used at least once a month. A group of foods, the combination of which would be suitable for a simple meal or part of a meal, is prepared. Each pupil prepares the entire group of foods in individual quantity. Only such foods are selected as have been previously prepared, so that this method affords a means of reviewing. Also, most satisfactory results are obtained by this method in training pupils to gain speed and skill in the preparation of several foods at one time.

In other subjects of the curriculum, topics relating to domestic science are included as follows: In machine sewing—hemming of dishcloths and towels; making of holders, aprons, and cases for silver. In applied art—making and decorating articles for the household, such as tiles, fern dishes, vases, and desk furnishings.

In botany—cell structure; storage of food materials in seeds and underground stems; food materials in leaves and stalks; growth of molds and yeast plants. In physiology—digestion of each foodstuff; uses of foods in the body; personal hygiene. In English—subjects pertaining to domestic science used as themes; spelling and pronunciation of culinary terms. In arithmetic—problems involving costs of foods; relation of nutritive value to cost of food and method of preparation; comparison of one method of cookery with another as to economy of time and fuel; division of quantities used in the ordinary recipe that the student may appreciate the relation of the individual to the practical recipe. Data for these problems are obtained from observations made in the kitchen laboratory; while skill is acquired in preparing a food material in the school kitchen, valuable information concerning the same food is received from propositions and solutions of mathematical problems.

Second year.—General subject: Composition, combination and serving of foods; dietaries. Method—laboratory work in food experimentation, cooking and serving of foods; making menus; calculation of fuel value of menus. The following subjects are treated: Batter and doughs; food combinations; planning, cooking, and serving meals; calculating of the fuel value of meals. Food composition and combination are selected for second-year work, because applied chemistry is a required science. Dietaries are included, so that the mathematical computations of food values can be solved in arithmetic, which is also in part a second-year study. The same methods are used as in the first year for the theory and practice of cookery for the first part of the second year.

During the latter part of the year entire meals are planned, cooked, and served. The food value of the meal is computed.

Related work in the second year is given in domestic art, applied art, applied chemistry, and mathematics.

Third year.—General subject: Applied biology, food preservation, and laundering. Method—laboratory work in school kitchen, laundry, and biological laboratory; recitations. The following subjects are treated: Food preservation, household bacteriology, laundering, home nursing, emergencies and invalid cookery.

Food preservation includes canning, preserving, jelly making, and pickling. Household bacteriology, embracing processes of sterilization, use of disinfectants and antiseptics, examination of air, water, ice, and milk, does much to elucidate work in food preservation, home nursing, and in invalid cookery.

Laundering furnishes practical application of scientific principles learned in applied chemistry with regard to soap making, removal of stains, and use of bluing and washing reagents. Methods of washing and ironing all garments and fabrics usually found in the family laundry are practiced.

No attempt is made to train pupils for professional nursing, but simply to give such theoretical and practical instructions as will enable them to care for the sick in the home—e. g., changing of bed linens; methods of bathing a patient; administering medicines; ventilating, heating, and furnishing a sick room; treatment of burns, cuts, poisoning, and fainting; bandaging of wounds. Home nursing also includes a study of pathogenic conditions which are dependent for the most part upon dietetic treatment. Special diets for sick patients are prepared. Much stress is laid upon children's diseases and the care and feeding of infants.

Related work, in the third year, is given in applied art and physics.

Fourth year.—General subject: Household management, food preparation. Method—laboratory work in school kitchen and furnished apartment; visits to markets; recitations.

The following subjects are treated: Advanced cookery, household sanitation, household economics, housekeeping, household architecture, and decoration.

Food preparation consists of advanced cookery, in which the fundamental principles given in the first and second years are reviewed and enlarged upon. Household sanitation considers the location of a house; construction, convenience, cost, and efficiency of heating, lighting, and ventilating methods and systems; water supply, removal of waste, care and cleaning of all materials and furnishings found in a home.

Household economics considers organizing, dividing, and systematizing work of the household and various economic problems of the home.

Situation and site of a home, materials for building, practical and artistic requirements for a home, house planning, finishing, furnishing, and decorating are discussed in the study of household architecture. Drawing plans for various rooms, indicating furniture and drawing complete plans for a home, are requirements for this subject.

To those students desiring to specialize in applied art, practical problems are given in designing and executing decorations for walls and hangings of various rooms of the school building and apartment for housekeeping.

The course ends with work in housekeeping in a furnished apartment. Related work in art history is given this year.

Vocational training.—Aside from the regular four-year course in domestic science, which has for its aim the training of homekeepers, there is offered, after the second year, an elective course in vocational cookery, requiring three or more consecutive hours preparing foods in large quantities. The school offers also vocational courses in sewing and millinery.

In the vocational cookery, the first problem is that of marketing. The pupils are given cash to pay for materials selected at the large markets. Purchases are carried back to school and registered in an account book. Then the foods are prepared. After obtaining the finished product, the cost of the materials and time of preparation are calculated. The product is then ready for sale; each girl in turn acts as cashier.

A public sale is held once in two weeks, a legitimate profit being made on all articles sold. Two or three times a week the foods are sold to the school lunch room at a very small profit.

The aim of this work is not only to gain skill in cooking, but to acquire knowledge in the purchasing of food, and to gain experience in business management.

Demands for graduates able to undertake cooking and catering are coming to the school, although the cookery course has just been established.

Section 4. A HOME-CRAFT COURSE—WADLEIGH HIGH SCHOOL, NEW YORK CITY.

The Wadleigh High School, New York City, has recently organized a home-craft course which is not only intended to provide home training, but also to furnish a new kind of secondary curriculum for the type of girl not attracted by the usual classical, scientific, or literary curricula. Nor is the course a usual manual-training course made over for girls. It includes the home-making subjects, but it makes novel provision for vocational study and puts a distinctly present-use valuation on all subjects. There are new subjects dealing not only with woman's home work, but with her social relations—historical, legal, cultural, economic. The purely disciplinary view of education is rejected; Latin and Greek are not heard of; the modern languages are elective; in mathematics a year of "household arithmetic" is required, and also another year of mathematics, unless equivalent work has been elected in the general course of the school. The other required general subjects are a year of English, devoted to inspirational literary study with composition and oral expression, a year of biology, two years of drawing, two years of music, four years of physical training. The required subjects of household concern are: Domestic science and domestic art, two years of each; hygiene and sanitation, household management, "social efficiency," and "essentials of conduct." Election to the

A. GROUP WORK, PUBLIC SCHOOLS, WASHINGTON, D. C.

One group as family practicing table service with salad course; another group taking notes; another, washing dishes.

B. CANNING SWEET POTATOES, SECOND YEAR HIGH SCHOOL, JAMESTOWN, N. C.

following amount may be had from all subjects taught in the general course of the school and from the special subjects each year:

First year (*6 periods*).—Household arithmetic, vocation study, study of vocation fitness, current history, epochs of English history, clothing—its care and remodeling—German, French.

Second year (*6 periods*).—Millinery, household chemistry, epochs of European history, epochs of American history, epochs of ancient history, history of women's work, history of arts and crafts, current history, German, French.

Third year (*14 periods*).—Domestic science, domestic art, applied design, German, French, applied physics, current history, music (appreciation).

Fourth year (*14 periods*).—Domestic science, domestic art, economics, fundamentals of legal procedure, German, French, current history, physiology, bacteriology and sanitation, household design and decoration, music (appreciation).

Section 5. INSTRUCTION RELATED TO THE HOME OFFERED IN ACADEMIC DEPARTMENTS OF HIGH SCHOOLS.

High schools that have no distinctive household science departments may provide instruction related to the home by applied topics and possibly applied courses in the departments of chemistry, biology, physics, economics, art, and other school subjects that bear directly on the household. The course in "domestic chemistry" given in the Los Angeles high schools (p. 92) well illustrates this possibility; and the experience of Mr. Rexford in teaching food values in applied biology, and the outlines of household physics and applied economics for high schools, given below, make the same point in other fields. Those interested in this "related instruction" should compare the statistical findings as to this situation in high schools (p. 109), and also see the parallel offerings in normal schools (p. 123) and colleges (Part III, Bulletin, 1914, No. 38).

Food instruction in biology.—Mr. Frank A. Rexford, teacher of biology in the Erasmus Hall High School, Brooklyn, N. Y., has emphasized the teaching of food values in high-school biology, and in particular has developed a successful method of securing the cooperation of the home with this instruction. He has drawn up a "one-portion food table," in which the food values are expressed in terms of "Food as we eat it, weight of the ordinary helping in ounces," and this is distributed as ounces of proteid, fat, and carbohydrate. He has also drawn up for students' use a dietary record blank for a three-day record which his students are asked to fill out at home and bring to the laboratory. Another blank form is provided for the weekly food account of the family, and the students bring in a report of the family cost of food, and the kinds purchased for the week. He has found a great interest on the part of the students and the parents in this type of study. It suggests a type of applied science instruction that can be undertaken in high schools that have no distinctly household science courses.

Applied physics or household mechanics course.[1]—The New Hampshire program of secondary school studies outlines a course in applied physics under the title of "Household Mechanical Appliances."

This is a field little worked, yet of great importance. It gives a ready opportunity to instruct girls in the principles of physics from the applied standpoint. It can be made an informational course of the greatest value. The concrete side of instruction will probably be better left for the most part to lecture-table demonstrations than to laboratory exercises of the ordinary type.

In condensed form the topics follow:

Heating appliances.—The nature of combustion. Fuels: Their essential chemical nature, source, relative cost. Heat: Study of the elementary principles of heat. Forms of heat generators. The cooking range: Construction, drafts, economy of heat, loss of heat. Gas and oil stoves: Compared with coal and wood ranges; waste of heat as compared with other ranges. Electric heat possibilities. Heating and ventilating the house. The hot-air furnace. Steam heat. Hot water: Construction of boiler and piping system; principle of convection current employed compared with hot-air and range hot-water heater; regulating devices; compared with steam and hot-air heat.

Plumbing.—Detailed scheme of typical residence plumbing system. The elementary principles of hydraulics. The water piping of a residence. The sewerage system.

Electricity.—Elementary principles; static and voltaic current; the electric current and wiring; electromagnetism apparatus depending on the principle of the electromagnet—door and other cell bells, annunciators, the telegraph and telephone, devices for thermostatic control of heat; the dynamo—construction of simple dynamo, wiring for current, the city system—power house, street mains, transformer, current compared with that from cell, storage battery, the electric motor.

Electric lighting: Transformation of current into heat and light; different forms of lamps; candle power, watts and watt hours, amperes, volts; wiring the house—danger from fire and why, precautions used, laws and ordinances and insurance regulations governing wiring.

Electric heating: Compared with lighting, appliances for heating, cost and possible economics in use as compared with other forms of heat Electric meter and reading same.

Gas lighting.—Different forms of gas used in lighting; gas meter. Oil and other forms of lighting; source, compared with gas and electricity, appliances, economy.

Power in the household.—Elementary mechanics: The pulley, screw, wheel and axle, inclined plane, belts and shafting. The water motor. Other sources of power, such as steam engine, hot-air engine, and gasoline engine. Labor-saving machinery which can be used for household purposes.

Exercises: 1. Heating appliances; description of different chemical elements; experiments showing illustrations of chemical combination; description of different oxidizing processes with what takes place; study of stove under draft and with draft closed, describe what takes place. Complete and incomplete combustion; study of smoky fire and correction; compute cost of heating with wood, coal, gas, gasoline, and oil at current rates, from data secured at school or in the household. Study, sketching and description of Bunsen flame. Experiment to show thermometer readings at freezing and boiling point. Experiment to show measurement of heat quantity. Experiment to show (*a*) conductivity of different metals, (*b*) convection currents. Melting and boiling points of a few substances other than water. Study of ice-cream freezing as illustration of freezing mixtures and of latent heat; study of the refrigerator as illustration of latent heat. (Most people think the cream freezes and the temperature is lowered in the refrigerator because the ice is cold.) Study and sketch essential features of different forms of ranges; make schema showing essential principles of heating and ventilating apparatus; make schema showing essential principles of hot-air furnace and ducts, steam boiler, and piping, hot-water boiler, piping, and expansion tank. 2. Plumbing; make schema showing system; experiment to show mercury balanced against air; show by notebook description what is happening; sketch different forms of pumps; make schema showing drainage piping in household. Set up voltaic cell; connect up cells and magnets and call bells under different conditions and for different purposes. Make schema showing house wiring for light. Connect up small electric motor to cells; belt motor to pulleys; apparatus, none except what can be obtained from the physics or chemical laboratory, the kitchen, or the home.

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[1] Two texts in "household physics" have recently appeared: Lynde, C. J., "Physics of the Household," Macmillan, 1914, pp. 313; and Butler, A. M., "Household Physics," Boston, Whitcomb and Barrows, 1914.

Instruction in applied economics in the high school.—In connection with household-science courses for girls and general courses in economics for both boys and girls in high schools, a type of instruction might be developed which would be of interest to both boys and girls, the general nature of which is suggested by the topics mentioned below. This topic or subcourse in "applied economics" should emphasize those economic matters having to do with the daily life of the household and the daily work of the wage earner, in part as follows:

The earning of money.—Choice of a vocation; emphasis upon local industries and vocations; each one studied as regards wages; preparation needed; constant or irregular employment; hygienic conditions; child labor; labor of girls and women; industrial conditions, wage-earning class especially; organizations of wage earners; factory welfare work; employers' liability; women's work.

The spending of money.—The family budget and the intelligent handling of money by the individual and within the family; each division of the family budget should be taken up in turn and detailed studies made, looking to the acquiring of practical control of family expenditures. A consideration of shelter, for example, should include standards of housing in the city and the country; the relation of law and municipal regulation to improved housing; responsibility of the landlord, janitor, and the householder; sanitary considerations with regard to the house and their cost; the improvement of shelter as regards roof areas; municipal measures which affect housing; the control of expenditures, systems of personal and household accounts, with enough practice to give skill.

The saving and investment of money.—Institutional methods of saving money, banks, etc.; insurance and its various forms; investments; loans; all of these topics taken up from the point of view of the wage earner and the middle-class person and carried out to a practical issue.

Section 6. RECOGNITION OF HOUSEHOLD SCIENCE FOR COLLEGE ADMISSION.

The need of securing college recognition in admission credit for courses taken in high school has influenced the high school in two ways. It operates to retard the introduction of new subjects, no matter how meritorious, into the high-school curriculum; it protects subjects already in even if they lack merit; it is, in short, an influence against progress as regards changes in the high-school curriculum. On the other hand, with regard to subjects already in the curriculum, the pressure from the colleges has been toward better standards of work. Home economics is now passing from the first of these positions to the second, as colleges have come to accept quite generally for entrance credit a limited amount of technical work in high school; this amount is placed, in a recent committee report (see below), at about one-fourth of the high-school curriculum. This solution can not be final, for the new vocational courses in high school will require at least one-half time for technical work, and public opinion will ultimately require the open ladder from these vocational courses into college quite as much as from the classical high-school courses.

High-school teachers in home economics must be on guard against the maldevelopment of what should be vocational work in home-making into academic pseudo-scientific instruction in order to curry favor for college entrance recognition. Let vocational work stand on its own feet and recognition will come duly. As well seek to organize academic, cultural, "scientific" courses in medicine or law as in household management and its subsidiary techniques; the final point of view in schools which teach the practitioner is always practice, skill, the vocation, the profession.

Three statements follow: Status of home economics as to college admission, four college admission units of North Central Association, and a suggested standard high-school course.

Status of home economics for college admission.[1]—In 1912 of 203 colleges giving the A. B. degree no one of them prescribed that household science *must be* offered for admission; but 79 of these colleges will accept household science if offered for admission, and 10 other colleges will consider its acceptance. In other words, 89 of 203 colleges recognize this subject as now taught in high schools as of sufficient educational worth to give it recognition alongside the older academic studies, as authorizing entrance upon a collegiate course of study leading to the A. B. degree. Of the 114 colleges not recognizing household science for entrance, 45 accept only men students, so that only 69 of 158 academic institutions maintain a negative attitude; i. e., 56 per cent recognize household science of admission. Similarly, of 85 engineering schools, 44 accept household science for admission; and of 31 colleges of agriculture, all but 3 accept household science for admission; i. e., 51 per cent of engineering schools and 90 per cent of agricultural colleges recognize household science for admission.

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[1] College Entrance Requirements. C. D. Kingsley. U. S. Bureau of Education. Bulletin, 1913, No. 7. See also College Entrance Requirements; report of teaching section committee. Lake Placid Conference on Home Economics, 1908, p. 69.

The amount of weight given to household science in the usual requirements of 15 units of high-school study is also significant. Of the 79 A. B. colleges accepting household economics for admission, 31 recognize not more than 1 unit, 18 accept 1½ or 2 units, and 9 accept 3, and 21 accept 3½ or 4 units or more. Only 65 of the 203 A. B. colleges do not recognize some one or more specified vocational subjects for entrance, and certain of these 65 colleges will consider such subjects.

Of 39 engineering schools, or schools of technology, 17 accept 1 unit or less, 11 accept 2 units, 2 accept 3 units, and 9 accept 4 or more units. Of the 28 agricultural colleges accepting home economics for admission, 10 accept 1 unit or less, 5 accept 2 units, 3 accept 3 units, and 10 accept 4 or more units.

Four college admission units of North Central Association.—The North Central Association of Colleges and Secondary Schools adopted in 1910 definitions of four units of work in household arts for college admission as follows:[1]

Plain sewing (1 unit).

Every exercise in sewing should illustrate an important principle or process, or a simple combination of such principles and processes. Hand sewing and sewing-machine work must be equally insisted upon.

(*a*) The various stitches and their special uses.
(*b*) Hand sewing, fundamental processes.
(*c*) The use and care of sewing machines and their attachments.
(*d*) The nature and special uses of cotton, linen, and woolen goods.
(*e*) The use of patterns; cutting out.
(*f*) Taking measurements; making of simple garments.

Sewing and millinery (1 unit):

(*a*) Making of shirt waists, wash dresses, and similar garments.

(*b*) Millinery: Study of materials for hats; making, altering, and covering hat frames. The planning, making, and trimming of seasonable hats of appropriate materials.

Throughout the course economy and good taste in dress.

Cooking (2 units):

1. Food classified and tested for food principles. A study of the effect of heat upon foods alone and in combination; with and without water and other liquids; experiments with leavening agents, and their uses shown in actual cooking. Bread making. The theory and practice of canning and preserving fruits, vegetables, and meats. Planning, cooking, and serving meals. Waiting on table.

2. The cost of food; market prices; the cost of meals. Household accounts. The family dietary: The planning, weighing, and cooking of apportioned meals. Diets for infants, invalids, and convalescents.

Sanitation: Selection of site, house planning; heating, lighting, and ventilating; water supply; disposal of waste; furnishing and decorating; cleaning processes, including laundry work.

Suggested standard high-school course.—The committee on articulation of high school and college, of the National Education Association, defines a high-school course as composed of 15 units, each constituting approximately a quarter of a year's work; it should include at least 3 units of English, 1 of social science (including history), and 1 unit of natural science; it should include two majors of 3 units each and one minor of 2 units, and one of the majors should be English; the requirement in mathematics and in foreign languages should not exceed 2 units of mathematics and 2 units of one language other than English; of the total of 15 units, not less than 11 should consist of English, foreign language, mathematics, social science (including history), natural science, or other work conducted by recitations and home study. The other 4 units should be left as a margin to be used for additional academic work or for mechanic arts, household science, commercial work, or any other kind of work that the best interests of the student appear to require. This means practically that the 15 units shall be divided as follows: English, 3; foreign language, 2; mathematics, 2; social science, 1; natural science, 1; and 2 additional academic units which must be so chosen as to increase the units in some one field to at least 3; and 4 units left as a margin for individual choice. A supplementary report from the committee permitted the substitution, in place of either 2 units of mathematics or 2 units of foreign language, of a second unit of social science and a second unit of natural science.

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[1] Proceedings of the North Central Association of Colleges and Secondary Schools, 1910, Chicago, pp. 144.

This committee mentions the following among other considerations determining such a curriculum:

> The high-school curriculum must not be overloaded by requiring the pupil interested in the new subjects to take all the old; a social civic education must be provided; tentative, vocational preparation must be given; individual efficiency must be increased; and, finally, mechanic arts, agriculture, or household science should be recognized as rational elements in the education of all boys and girls, and especially of those who have not as yet chosen their vocation. By means of exclusively bookish curricula false ideas of culture are developed. A chasm is created between the producers of material wealth and the distributors and consumers thereof. * * * Our traditional ideals of preparation for higher institutions are particularly incongruous with the actual needs and future responsibilities of girls. It would seem that such high-school work as is carefully designed to develop capacity for and interest in the proper management and conduct of a home should be regarded as of importance at least equal to that of any other work. We do not understand how society can properly continue to sanction for girls high-school curricula that disregard this fundamental need, even though such curricula are planned in response to the demand made by some of the colleges for women.[1]

It may be suggested that while the course recommended by this committee makes very adequate allowance for industrial work as supplementary studies in a general high-school curriculum, it does not provide sufficient room for studies that would be primarily vocational. A home-making agricultural or commercial course in a high school which allows only one-fourth time for "vocational" studies seems to the writer an anomaly. It is the development of vocational high-school courses that are about one-half vocational, and the recognition of such courses for college admission, that would seem to be the next important steps in this field.

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[1] College Entrance Requirements. C. D. Kingsley. U. S. Bureau of Education, Bulletin, 1913, No. 7, pp. 97–98.

Section 7. HIGH SCHOOLS GIVING COURSES IN HOME ECONOMICS, BY STATES.

There were in 1913 some 1,345 high schools in the United States which reported registration in courses in home economics. There was in these courses a total registration of 66,914 students, of whom nomics courses in 57 different high schools. In 1914, 2,440 high schools were reported as teaching home economics (see Part IV of this report).

The high schools which teach home economics were distributed among the various States as indicated below:

TABLE 11.—*High schools reporting registration in home-economics courses in 1913 and in 1914, by States.*

States.	High schools in State in 1911-12.	High schools reporting home economics in 1913.	High schools reporting home economics in 1914.
Alabama	165	15	76
Arizona	14	3	18
Arkansas	126	11	13
California	225	65	159
Colorado	113	15	56
Connecticut	65	1	12
Delaware	23	2	3
District of Columbia	7	1	1
Florida	88	8	22
Georgia	259	23	22
Idaho	62	16	9
Illinois	671	74	166
Indiana	634	88	123
Iowa	586	70	173
Kansas	395	93	125
Kentucky	166	16	17
Louisiana	118	22	5
Maine	181	8	23
Maryland	86	37	46
Massachusetts	240	28	90
Michigan	395	34	65
Minnesota	248	99	80
Mississippi	162	29	45
Missouri	422	33	43
Montana	49	11	16
Nebraska	367	31	57
Nevada	16	2	2
New Hampshire	65	9	43
New Jersey	154	6	35
New Mexico	26	1	8
New York	648	26	67
North Carolina	242	12	22
North Dakota	142	33	13
Ohio	834	33	82
Oklahoma	194	33	33
Oregon	117	26	24
Pennsylvania	875	30	73
Rhode Island	23	1	7
South Carolina	170	12	30
South Dakota	142	12	12
Tennessee	167	29	65
Texas	527	51	70
Utah	34	18	41
Vermont	68	1	10
Virginia	297	21	26
Washington	196	56	137
West Virginia	90	12	19
Wisconsin	308	89	153
Wyoming	....	....	3

Section 8. TIME ALLOTMENTS IN HIGH-SCHOOL CURRICULA IN HOUSEHOLD ARTS.

(*A.*) *Time allotments by subjects or topics.*—Statements were given by 288 high schools as to the instruction given in some 19 different subjects and topics in household science. Of these subjects, 5 relate to foods, cookery, and nutrition; 5 to sewing, dressmaking, textiles, and costume design; and 9 to the house, its furnishings, household management, housewifery, laundry, sanitation, and nursing. These three groups of courses may be designated foods, clothing, and shelter and management. There is presented in Table 12 a series of facts about each of the 19 subjects or topics, viz: (1) The number of high schools reporting that the course or topic is taught; (2) the minimum number of hours and the maximum hours given to the topic in any school; (3) the median hours so given, i. e., when the hours are arranged in the order of size, the hours given by the school midway between the schools giving the smallest and the largest number of hours; (4) the two limiting numbers which, when the hours of instruction are arranged thus, will include between themselves the middle half of the schools, i. e., one-half of the numbers just above and just below the median value; (5) the modes or certain numbers of hours for which instruction is more commonly given than for other numbers.

Referring now to Table 12, it is evident from column 1 that cookery courses are at present taught in more high schools than are sewing courses. There are 428 elementary or advanced cookery courses reported, as compared with 356 sewing and dressmaking courses; and 592 courses in foods, including cookery, food chemistry, and dietetics, as compared with 435 in all "clothing" subjects, including sewing, dressmaking, millinery, textiles, and costume design. It seems certain, therefore, that cookery with its related theoretical instruction is a third more frequent in high-school curricula than sewing and its related theoretical courses in textiles and costume design. In the elementary school, sewing courses are more numerous than cookery. The changed relation in the high school is in part doubtless a direct result of this situation in the elementary school; in part, cookery will be favored in the high school because of what seem its greater resources in subject matter. The third group of courses, "shelter and management," includes the following subjects taught in the number of schools indicated: Household management, 31; sanitation, 26; accounts, 20; decoration and furnishings, 23; housewifery, 23; home nursing, 24; care of children, 6; and laundry, 27. Instruction in these topics, amounting to 206 courses in all, have developed more recently in home education and could scarcely yet expect to secure more recognition than it has, viz, one-half that given sewing and one-third that granted cookery instruction. Some of the important developments in high-school teaching will probably come in this field.

The importance of instruction in any of these subjects is only suggested by the number of courses given; it is better measured by the number of hours of teaching actually devoted to the individual subject. In columns 2–5 of Table 12 are given the minimum and maximum hours of instruction, the means, limits which include 50 per cent of the courses, and the modes, each in terms of the hours of instruction devoted to the subject, for these 19 subjects taught in high schools. The most important single number as a measure of the amount of time usually given to any subject or topic is the mean number of hours (column 3, Table 12), and we shall compare the mean hours for the various subjects.

Elementary sewing and dressmaking are the subjects which command the largest number of hours of instruction—108 hours as expressed by the mean. The typical elementary cookery course in high school as measured by the mean is given 96 hours of teaching, and the advanced cookery course 80 hours, while food chemistry is given 60 hours and dietetics 40 hours (and in nearly one-half the cases both these courses are given in the same schools); finally, cookery for the sick has a mean time allotment of 26 hours. The five food courses, if given together in their typical form, would require 302 hours of teaching (the sum of the mean hours of instruction given to each of these courses), while the five clothing courses (sewing, dressmaking, millinery, textiles, costume design) would similarly require 408 hours, a third more than the food courses, and the nine other courses and subjects (house, household management, decoration, accounts, housewifery, nursing, care of children, laundry, sanitation) would require for typical instruction 253½ hours. For typical courses in all 19 divisions of home economics as now given in American high schools there would therefore be required 963½ hours of instruction (the sum of the mean hours allotted these subjects). Assuming that a student spent 12 to 15 hours a week under instruction in classroom exercises, it is evident that two years of 36 to 40 weeks of study devoted exclusively to home economics courses would no more than exhaust the possibilities of this new subject. No one would propose organizing such a plan of continuous, exclusive study of home science for the high-school girl, but the facts adduced show that there is a wealth of material in this practical arts field which can be combined in proper order with English, social and natural science, and other high-school subjects to give a desirable four-year high-school curriculum with a center of home science which will be rich in general values, but specialized toward the home as a vocational field.

TABLE 12.—*High-school courses and topics in home economics—Hours of instruction—General tendencies.*

High-school courses.	Number of courses reported.	Minimum and maximum hours of instruction reported.	Median hours of instruction.	Limits which include half the courses, hours of instruction.	Modal hours of instruction.
Elementary cookery	253	24–450	96	57–163	54, 57, 72, 80, 108.
Advanced cookery	175	5–400	80	54–152	40, 48, 54, 57, 72, 80, 108, 120.
Cookery for sick	58	1–360	26½	12– 76	
Food chemistry	57	1½–266	60	34–120	40, 72, 120, 200.
Nutrition, dietetics	49	1½–120	40	24– 71½	
Elementary sewing	230	12–600	108	54–108	72, 80, 108, 180.
Dressmaking	126	14–450	101–108	54–160	72, 160, 180.
Millinery	34	18–200	76–80	40–120	
Textiles	31	6–320	53⅓	18– 20	
House	26	4–180	20–24	15– 72	
Household management	31	5½–133⅓	36	18– 72	
Household accounts	20	4–126⅔	24	12– 76	
Housewifery	23	1½–270	36	13½– 45	
Home nursing	24	3–360	15–18	12½– 40	15.
Care of children	6	3– 45	9–25	....	
Laundry	27	4½–120	36	[1] 12– 47½	
Household sanitation	26	4–120	32–33⅓	24– 54	
Household design	23	4–180	33⅓	[2] 15– 60	
Costume design	14	1½–240	63⅓–67⅔	45– 76	

[1] 55 per cent courses.

[2] 52 per cent courses.

(*B*) *Time allotments by groups—Foods, clothing, and shelter and management.*—By combining the hours of instruction of the different household economics subjects into the three groups—food, clothing, shelter and management—the following facts are secured (Table 13): Of 288 high schools 257 (89 per cent) give courses in foods, 232 (80.5 per cent) give courses in clothing, and 72 (25 per cent) have courses in shelter and management. The total amount of instruction given in foods varies for the 257 schools from 24 to 1,200 hours; the median amount is 189 hours. The total number of hours of instruction in clothing varies for the 232 schools from 14 to 1,240 hours; the mean value is 175–180 hours. The total number of hours of instruction in shelter and management for 72 schools varies from 3 to 680 hours; the median value is 54–62 hours. It is evident that food appears as a subject of instruction in high schools in about 10 per cent more schools than clothing, the former being found in about 9 out of 10 schools that teach household arts, and the latter in 8 out of 10. The subject of shelter and household management appears in about one-fourth the schools that teach household arts. Were typical high-school instruction in these three main divisions of subject matter to be given, it would require approximately 180 hours in foods, 180 hours in clothing, and 60 hours in shelter and management.

Table 13.—*Total hours instruction in foods, clothing, and shelter and management in 288 high schools—General tendencies.*

	Food courses.	Clothing.	Shelter and management.
Number of schools offering	257	232	72
Percentage of schools offering	89	80.5	25
Smallest and largest hours offered	24; 1,200	14; 1,240	3; 680
Median hours offered	189	175–180	54–62
Modes	54; 80, 108; 180; 240; 288; 360.	72; 180; 288; 360.	....

(*C*) *Time allotments—All subjects combined.*—From 288 high schools the data were secured for the total number of hours' instruction given in all subjects combined in household science and art. The instruction ranges from 25 to 2,560 hours in total amount in different schools. An abbreviated distribution follows:

Table 14.—*Time allotments for all subjects combined, by total hours.*

Hours.	Schools.
25–49	12
50–99	31
100–149	32
150–199	33
200–249	24
250–299	11
300–349	8
350–399	17
400–449	14
450–499	14
500–549	9
550–599	8
600–649	13
650–699	4
700–749	11
750–799	7
800–849	2
850–899	7
900–949	4
950–999	4
1,000–1,049	2
1,050–1,099	1
1,100–1,149	5
1,150–1,199	1
1,200–1,249	2
1,250–1,299	2
1,400–1,499	2
1,500–1,549	2
1,550–1,599	1
1,600–1,649	1
1,850–1,899	1
2,350–2,399	1
2,500–2,549	1
2,550	1

From the detailed distribution the mean was found to be 304–315 hours of instruction, and this may be taken as the typical number of hours of home-economics teaching actually given in the average American high school at present. Half the schools give between 144 and 576 hours.

Section 9. DATA ON HIGH-SCHOOL CURRICULA.

(*A*) *Required versus elective high-school courses.*—Of 279 schools answering, 39 (13.9 per cent) require some one or more courses in household arts of all girls; 240 offer all household-arts courses as elective. The question whether any household-arts courses should be required is a fundamental one on which two opinions are possible. If one holds to the elective system absolutely, of course one would have no place for a required home-science course. If one believes that certain courses should be required without individual choice, household science would seem to merit approval as a uniform requirement for high-school girls. When a requirement has been set, it varies, of course, with local conditions; in one school all girls except those in the classical course take household science; in another only the girls in the English course must take this subject; the requirement is set as one year of food and one year of clothing instruction in certain schools; in others one year only is required, and the balance are elective. This last seems worthy of recommendation. If the household science is well taught, it will secure its own registration after the first year; if it can not so secure registration, the instruction given in that school probably does not merit further compulsory attendance.

In discussions of the elective system absolute freedom in election is likely to be favored by the sentimental argument for "freedom," "liberty of choice," etc. It is well to remember that some things are imperative, whether we like to do them and choose them or not; and among such unavoidable things of life are the needs of food, clothing, shelter, care in sickness, preventive hygiene, sanitation, and the experiences which center in the home.

(*B*) *Percentage of high-school students in elective courses in home economics.*—For 196 high schools reporting the percentages of students in elective home-economics courses the mean percentage was 33 to 35 per cent, and 50 per cent of the schools reported percentages between 20 per cent and 50 per cent. This indicates that in high schools offering courses in home economics at least a third of the girls are commonly taking the courses. In 41 per cent of the schools one-half or more of all girl students take elective home-economics courses. The distribution of percentages reported follows:

TABLE 15.—*Percentage of students electing home economics in high schools.*

Percentage.	Schools reporting.	Percentage.	Schools reporting.
1	1	35	2
5	1	36	1
6	1	37	2
8	2	40	9
10	9	42	1
12	5	47	1
14	2	48	1
15	3	50	42
16	4	51	1
17	1	60	8
20	24	65	1
22	2	66	4
23	1	70	2
25	19	75	13
29	1	80	1
30	5	90	7
33	17	95	2

(*C*) *The four-year high-school course in home economics.*—Of 214 high schools furnishing data, 60 report that they offer a four-year course in home economics, and 154 report that they do not offer such a course. Approximately, therefore, one-fifth (19.6 per cent) report such a course; doubtless a fourth or more actually offer it. Of the 60 schools reporting the four-year course, 43 state the percentage of girls in the high school who take the four-year home-economics course; it varies from 5 to 100 per cent. The mean percentage is 25, and one-half of the schools have from 20 to 33 per cent of their girl students in the four-year home-economics course.

(*D*) *Vocational high-school curricula in household arts.*—The inquiry as to vocational high-school curricula presented a general negative result. There were the following affirmative answers, but the lack of agreement as to the meaning of "vocational" (used here as meaning preparation for earning a livelihood, but including homemakers' courses) probably makes some of these returns dubious: Dressmaking courses, 11 schools; millinery, 6; costume design, 3; household management, 5; nurses' preparatory, 2; child's nurse, 2; cook's course, 5. Chicago, Boston, and other cities report dressmaking and millinery courses; Mount Vernon, Ind., Columbus, Ga., Cadillac, Mich., Newton, Mass., and other schools report courses in cooking; Newton, the preparatory course for nurses, and other courses; and Passaic, N. J., and Syracuse, N. Y., courses for the child nurse. These vocational curricula, it is very evident, are just beginning to be explored as to possibilities in high-school teaching.

Section 10. HIGH-SCHOOL TEACHING—SEPARATE DEPARTMENTS, DEPARTMENTAL COOPERATION, HOME COOPERATION.

(*A*) *Departmental teaching of home economics in high schools.*—Of 230 high schools furnishing data, in 160 (69.6 per cent) there are no departmental divisions in the teaching of home economics—i. e., the same teacher gives instruction in both food and clothing courses. In 70 schools (30.4 per cent) there is a departmental organization—i. e., one instructor teaches the food courses exclusively, and so for other divisions. In 4 schools there are both types of teaching, the specialist in the single field and the teacher who works in several fields. Specialization can only take place in the larger high schools; given the possibility of specialized teaching, and its desirability will not be questioned. The figures quoted probably express the fact that specialized teaching is possible in about 3 out of 10 high schools reporting, rather than suggest the adoption of it as desirable by so small a proportion and its rejection by the large majority of schools.

(*B*) *Cooperation with other departments in high-school teaching of home economics.*—Economy requires wherever possible coordination between academic, scientific, and other teaching departments in high schools and the practical arts departments, whether of industry, agriculture, home economics, or what not. The two most important department interrelations for home economics teaching are (*a*) those between chemistry and home science, especially in foods and cookery; and (*b*) those between fine arts and clothing and house decoration. Of 199 high schools replying, 117 (59 per cent) state that more or less of cooperation has been developed between chemistry instruction and different divisions of home economics, while 82 schools (41 per cent) report no such cooperation. This cooperation has taken the form—e. g., in the technical high school, Cleveland, the high school at Houghton, Mich., and many other schools—of a household chemistry or food chemistry course for girls instead of a standard chemistry course alike for both boys and girls. Similarly, of 193 high schools replying, 100 (51.7 per cent) report that the art department cooperates more or less in a direct way with home-economics teaching, while 93 schools (48 per cent) report negatively.

(*C*) *Home cooperation in high-school teaching.*—Of 232 replying, 55 high schools (23.7 per cent) report that some form of cooperation between home and school has been effected in the teaching of home economics, as in the completion of sewing projects at home and the repeating of cooking exercises at home. In the absence of equipment a start has sometimes been made in household-arts teaching by presenting problems at school to be entirely worked out at home and later reported upon with results at school. Such a method, however, makes it impossible to handle the actual process educationally by having expert criticism and discussion at the moment of action. The proposal to give credit for home practice in a technique taught at school belongs here and has value in developing interest for pupil and the home adults alike, but it may introduce objectionable features if it emphasizes for young children deadening routine rather than the progressive solving of new problems.[1] Here, too, belongs the Crete plan of teaching household arts through the organized voluntary services of home women, who teach groups in their own kitchens. The fact that 76 per cent of the schools reporting have not utilized in teaching household arts the homes from which their children come, indicates that much progress is possible here.

Section 11. SALARIES OF HIGH-SCHOOL TEACHERS OF HOME ECONOMICS.

In 244 high schools furnishing data the salaries varied from $315 to $2,600;[2] the median salary is between $800 and $849, and 50 per cent of the salaries are between $700 to $749 and $1,000 to $1,049.

The distribution of salaries by States and amounts is given in Table 16.

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[1] See Part I of this report, Bulletin, 1914, No. 36, p. 33.

[2] The salaries are entered by groups of fifties—i. e., all between $500 and $549 are entered as $500; the first and last columns are exceptions. Where a school reported a minimum and maximum salary, the maximum was entered.

TABLE 16.—*Salaries of high-school teachers of home economics, by amounts and by States.*

	$300.	$400.	$450.	$500.	$550.	$600.	$650.	$700.	$750.	$800.	$850.	$900.	$950.	$1,000.	$1,050.	$1,100.	$1,150.	$1,200.	$1,250.	$1,300.	$1,350.	$1,400.	$1,450.	$1,500.	$1,550.	$1,600.	$1,800.	Over $1,800.
Alabama								1																			1	
Arizona												1																
Arkansas																												
California															1			2		1	1	3					1	
Colorado												1	1	1		1		1										
Connecticut													1	1														
Delaware																												
District of Columbia																											1	
Florida																												
Georgia							1	1						2														
Idaho												1																
Illinois		1		1	1		2	2	2	2		3	1	2			1											[1] 1
Indiana					2		1	3	2	1		4		3		1		1										
Iowa					3	2	3	1		1	1			1														
Kansas							1		1	2	1	1		2														
Kentucky											1																	
Louisiana																												
Maine							1																					
Maryland											1																	
Massachusetts						2		2	3	3		2	1	1				1			1							
Michigan						1	2	1	1	2			1	6		1												
Minnesota					1	1		3	1	2	2	1						1						1				
Mississippi							1																					
Missouri				1			3					2											1			1		
Montana																1								1				
Nebraska								2	1																			
Nevada																												
New Hampshire																												
New Jersey										1	3			1	1	2		1						1			1	
New Mexico																												
New York		1				1	1		3	3	2	1	1	1						1								
North Carolina			2																									
North Dakota							1			3				1														
Ohio			1			2		1	1	1					1			1										[2] 1
Oklahoma							1		2			1						1										
Oregon										1	1	1		1														
Pennsylvania				1		2	1		1			1												2				
Rhode Island																								1				
South Carolina	[3] 1			1		1		1		1																		
South Dakota											1	1				1												

[1] $2,600.

[2] $2,400.

[3] $315.

TABLE 16.—*Salaries of high-school teachers of home economics, by amounts and by States*—Continued.

	$300.	$400.	$450.	$500.	$550.	$600.	$650.	$700.	$750.	$800.	$850.	$900.	$950.	$1,000.	$1,050.	$1,100.	$1,150.	$1,200.	$1,250.	$1,300.	$1,350.	$1,400.	$1,450.	$1,500.	$1,550.	$1,600.	$1,800.	Over $1,800.
Tennessee	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Texas	....	....	....	....	....	1	....	1	3	1	....	1	....	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Utah	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Vermont	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Virginia	....	....	1	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Washington	....	....	....	....	....	....	....	....	....	1	....	....	1	....	....	....	....	1	....	1	1	....	....	....	....	....	....	....
West Virginia	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wisconsin	....	....	....	....	....	1	3	1	1	1	1	2	....	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....
Wyoming	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
United States	1	2	4	4	8	14	23	20	22	26	15	25	7	26	3	7	1	11	....	4	3	3	1	6	....	1	4	2

Section 12. CONTINUATION EDUCATION IN HOUSEHOLD ARTS.

In addition to the regular program of elementary and high school courses, it is evident that instruction in household arts must be provided for the much larger group of girls, young women, and home women who are out of school if the purpose of an education for better homemaking is to be adequately achieved. School instruction in household arts primarily reaches the next generation of homes; it may not affect the home women of to-day. Some of the agencies for aiding home women are described in other sections of this report—the extension education of colleges and universities in the home-economics field, agencies for the betterment of rural homes—but the agency of greatest promise in this field is continuation instruction of an organized sort which the public schools are beginning to provide for women outside the regular school enrollment.

Thus the association for the study and prevention of infant mortality in its campaign is urging the great importance of continuation schools of homemaking; that is, schools to pick up again and continue the training of girls when they have become young women, and are either meeting the responsibility of establishing the new home or, a little later, are facing the problems of child care. The 1911 resolutions of the infant mortality association request each State to appoint a commission on continuation schools of homemaking, and urge that such schools be conducted, if possible, in model houses or flats; that practice in the care of infants, children, and the sick be provided whenever possible; and that special efforts be made to create day continuation schools as well as, or in preference to, evening schools, and also to secure cooperation of employers in part-time schools.[1]

Massachusetts as a State is probably most awake to this problem in its provision for practical arts classes in homemaking open both to wage-earning and home women. State aid is given for this as for other industrial education. Boston has daytime continuation classes meeting in a housekeeping flat; at several school centers there are afternoon lectures and conferences for mothers and homemakers. Courses in cooking and sewing are also offered in various elementary school buildings, and evening household arts classes in dressmaking, cooking, millinery, and embroidery are offered in 17 centers for both actual and prospective homemakers.

In these Boston evening classes the instruction is organized on a unit-course plan—i. e., registration is taken for a single subject, instruction in which will take a definite number of hours sufficient to give practical skill in the limited field, and teachers are sought who are practically skillful in the special subject chosen. This point is evidently one worth observing in the organization of such instruction. Practical persons, housewives, and wage-earning women, for example, are more ready to enter a class for a definitely limited practical purpose, such as learning to make bread, cook vegetables, trim hats, make shirtwaists, etc., than they would be to study "domestic science" or some other "subject." It is the superiority of the vocational appeal in the vocational field. Pressure can thus be put upon the students for efficiency in work and a workmanlike product.

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[1] See transactions of the association, 1911-12-13.

The director of continuation schools in Boston makes the following statement regarding the daytime continuation classes in household arts:

> The school committee has rented an apartment located conveniently for the employees of several candy factories (52 Tileston Street) and has equipped the apartment in such a manner as could be provided by a young couple of small income. A very competent homemaker of practical experience has been placed in charge of this apartment, and she receives from the candy factories groups of approximately 10 girls who are permitted to attend during working hours without loss of pay. Sessions are of two hours each, conducted twice a week. The teacher in charge is now handling five such groups. During the time in which classes are not in session the teacher in charge visits the factories and homes of her pupils. Instruction is intended to cover all of the ordinary duties of a simple, but well-managed home. These classes have been in operation for about two years and have been received with hearty support by both employers and the community.

The director of the classes reports that her method is to proceed in a conversational way and maintain an atmosphere like that of a home where a mother is teaching her daughters and a group of friends.

The "Home School," Providence, R. I.,[1] is primarily a continuation school for working girls, which attempts to give them training in housecraft under home conditions. The school is conducted in a five-room flat and is part of the public-school system. One of the suggestions arising from its experience is that women living at home might find a supplementary source of income in home industries, such as baking, jelly making, home market gardens, needlework, art work, etc. The Providence home school sells its own products of bread and cake, finding a ready demand for them, and it is believed that the training here given young women wage earners will enable them to undertake similar productive work later in their own homes. Such a method of economic earning by the married woman is certainly preferable to her going out into outside employment to the detriment of the home, if the danger of sweated employment can be avoided.

The home woman can best be reached, probably, by daytime lectures and continuation classes. A promising experiment is that inaugurated in January, 1914, by the Rochester (N. Y.) Board of

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[1] The Home School. A. W. Trowbridge. Houghton-Mifflin Co. 1913.

Education. An afternoon course (4 o'clock) in "health lessons for women" was established in response to a taxpayers' petition—

> Requesting that classes in the branches of physiology, hygiene, dietetics, disease symptoms, preventive medicine, nursing, and first aid be established at such hours as women could most conveniently attend, i. e., from 4 until 5 o'clock in the afternoon; and that there be morning and evening classes for such as can not attend in the afternoon, so that every woman in this city shall have the opportunity of gaining this most necessary knowledge.

Twenty-four lessons were given, the first 12 by a woman physician, the second by a nurse. The subjects are as follows: By the physician—1. Physiology; 2. Care of the child, birth to 2 years; 3. Care of the child, 2 years to 12 years; 4. Physiology, hygiene, and psychology of adolescence; 5. First aids; 6. Emergencies; 7. Emergencies; 8. Causes of disease; 9. Prevention and recognition of disease; 10. Rational principles for the cure of disease; 11. Household and civic hygiene; 12. Motherhood. By the nurse—1. General nursing; 2. Care of child, baby to 2 years of age; 3. Care of child, 2 years to 12 years of age; 4. Making beds; 5. Bandaging demonstration; 6. Care of sick room; 7. Care of room; 8. Dietetics—milk, use of foods; 9. Dietetics—fruits and vegetables; 10. Dietetics—foods and preparations; 11. Nursing the invalid child; 12. Obstetrical care.

Experiments with daytime classes for home women, to provide practical work and laboratory instruction in unit subjects of the household, were carried out by the public schools of several cities last year, notably with great success at Montclair, N. J., where about 200 women received instruction, and where this year the plan has been continued and extended to include a class for housemaids, which they attended at daytime hours and on their employers' time. Another example is the Sewickley, Pa., schools, which last year organized three cooking classes under the auspices of the local women's club, one for white maids and one for colored and white maids (serving girls), and one for housewives. A fee of $2.50 for the maids' classes and $4.50 for the housekeepers' class was charged. In many schools, particularly public high schools, either the regular classes in home-making subjects have been opened to young women and housekeepers of the community, or more frequently special classes have been organized to give practical instruction in home-making subjects to women not members of the school.

New York City maintains an evening public-lecture service in connection with the public schools, in which in a single year 696 lecturers have spoken on 1,746 different topics before 5,573 audiences with a total attendance of 1,000,190 persons. Some of the lectures have reference to the home. In 1911–12 a course of eight lectures on "Pure foods and their preparation" was given by Prof. John C. Olsen and a score of individual lectures upon foods, marketing, milk supply, and other hygienic questions of home concern.

V. STATE NORMAL SCHOOLS AND EDUCATION FOR THE HOME.

Practically all of the State normal schools now include in their curricula courses related to the home. Probably half of these normal schools are requiring some instruction in household arts as an element in the general curriculum for grade teachers, while a number of State normal schools now give courses for training supervisory teachers of household arts, the standards for which are properly in advance of courses for regular grade teachers. This advanced instruction in household science in preparation for supervisory teaching is sometimes limited to one normal school in a State, with less advanced departments of home economics in the other normal schools. One State (California) has a special normal school devoted to manual training and home economics exclusively. Many normal schools give homemaking courses in addition to teachers' courses, and thus broaden their courses from merely teacher-training to include curricula in household management and other technical fields. Fully accepted, this theory would develop the "normal schools" into vocational colleges, something foreshadowed possibly in the Wisconsin plan (p. 118). The normal school is aiding in the movement for rehabilitating country life, with a spirit like that of the State colleges, in some cases with a special department devoted to rural problems, in which the rural home has prominent consideration (p. 121). In several normal schools, extension work through neighboring rural schools is organized, as at the Harrisonburg (Va.) Normal School, and in such cases home betterment is one objective (p. 122). Enterprising science teachers in normal schools, as in colleges where there are no departments of household science, are exploring the possibilities of instruction related to home problems. The State normal school at Westfield, Mass., offers an illustration of this. In short, American normal schools are already making a great contribution to the movement for better homemaking, by furnishing all their graduates with some of the special knowledge on which the art of right living is based, and increasingly by training both special teachers of home economics, and also graduates of special vocational courses who are ready to apply trained skill in homemaking and in some of the industrial applications of household science. This last point suggests a wider future for the public normal school than the field it now occupies. May it not be used as an instrument of the State in the vocational-education movement which is upon us, its curriculum broadened to include the vocations of industry, agriculture, commerce, and the household, as well as the teaching of these vocations, and the State thus find ready to its hand efficient vocational colleges wherever there is now a State normal school?

Here we are concerned, however, with the work of the public normal schools, as they now exist, in relation to the provision of an education for the home.

Those interested in the entire problem of training teachers of home economics should consult, in addition to this division on normal schools, the next division, on technical institutes, and parts of the division on colleges, which deal with college courses for teachers. (For matters of equipment in normal school, see p. 50 in Part I of this report, Bulletin, 1914, No. 36.)

Section 1. FOUR-YEAR COURSE IN HOME ECONOMICS; A VOCATIONAL COURSE: STATE NORMAL COLLEGE, ALBANY, N. Y.

This institution, which has for its chief function the training of secondary school teachers, offers to high-school graduates a four-year special course for teachers of domestic science and domestic art leading to the degree of bachelor of science in household economics. While the Normal College offers work more advanced than that of normal schools generally, it is believed that its courses in household economics will be suggestive of possibilities to other normal schools. There are required in household economics subjects 7, 9, 10, and 4 points, respectively, in the successive four years, a total of 30 points in 63½ points required for four years, so that approximately one-half of the curriculum is devoted to household-science subjects. The household-science course in the Normal College totals 1,884 hours of instruction, which is far above the mean total of 600 hours of household-arts teaching in normal schools generally (p. 135). There is proper emphasis on natural science; but economics and social science are, unfortunately, lacking except for the industrial-history course. The details follow:

First year.—English, 2 points; chemistry, 4; industrial history, 1; elementary sewing, 2; plain sewing, 2; household decoration, 1; textiles, 1; laundering, 1; electives, 2; total, 16.

Second year.—English, 2 points; psychology, 3; chemistry of foods and nutrition, 3; elementary cookery, 1½; intermediate cookery, 1½; millinery, 1; costume design, 1; household physics, 1; electives, 2; total, 16.

Third year.—Applied design, 1 point; advanced applied design, 1; dressmaking, 3; household management, 1½; dietetics, 1½; advanced millinery, 1; method of teaching domestic art, 1; history and principles of education, 4; electives, 2; total, 16.

Fourth year.—Advanced cookery, 2 points; home sanitation and bacteriology, 1; method of teaching domestic science, 1; psychology, 1½; general methods of teaching, 2; principles of industrial education, 1; method of teaching, 1; observation and practice teaching, 2; electives, 4; total, 15½.

A four-year vocational course for women.—To those who do not wish to fit themselves as teachers of home economics a "special four-year course for women," leading to the B. S. degree, is provided in the Albany Normal College. This permits, after the first year, the election of advanced work "in millinery, textiles, and dressmaking for those in domestic art, and in cooking, chemistry, and sanitation for those in domestic science," and may be described doubtless as a homemakers' course; according to the standard urged elsewhere for such courses, liberal studies might well occupy half time in such a course.

Section 2. A STATE PLAN FOR HOME ECONOMICS IN NORMAL SCHOOLS—WISCONSIN.

The eight normal schools of Wisconsin have a well-considered plan whereby some household-arts work is offered in each normal school, while a special department of domestic science and domestic art, affording comprehensive training, is maintained at one school—the Stevens Point Normal School. Moreover, by recent arrangement the State normal schools have been correlated with the State university, so that a student may take the first two years of a college course in one of the State normal schools and then pass to the university for the last two years, either for a general or professional course. This arrangement makes it possible for young women to secure a four-year training in home economics, the first two years in the State normal school and the last two in the home-economics department of the State university. In effect, it establishes a system of tax-supported State junior colleges located at various points throughout the State in affiliation with the university.

A special department of domestic science and domestic art at the Stevens Point Normal School was opened in 1903 and has had a constantly increasing enrollment, numbering 68 in 1912–13, with courses intended to train teachers for the grades and high schools, and also to furnish a training in homemaking for young women who do not intend to teach. For teachers a three-year domestic science and domestic art course is provided with specialization in either line, and also a two-year course in domestic science and domestic art without specialization. Vocational courses not in preparation for teaching are offered for one year and for two years, the former including enough science to give a basis for the immediately practical, and the latter including more advanced work in both domestic science and domestic art. All of the foregoing courses require high-school graduation for admission. There is also offered a five-year domestic science and domestic art course which requires graduation from the eighth grade for admission. Individual courses are offered by the domestic science and domestic art department at the Stevens Point Normal in the following subjects: Chemistry, four courses; physics, general biology, bacteriology, physiology, cookery, advanced cookery, dietetics, home nursing and emergencies, laundering, sanitation, household management, drawing, interior decoration, sewing, costume designing, millinery, advanced millinery, home and social economics. Educational courses in observation psychology, theory of education, history of education, school management, organization and practice teaching, are also included. The department is equipped with laboratories, kitchen, sewing rooms, laundry, dining room, bedroom, and emergency room.

> Additional to this it is planned to construct a moderately priced cottage, containing living room, two bedrooms, dining room, kitchen, cellar, all neatly and adequately furnished in good taste, in which the young women of the senior class may live in turn, in groups of four for short periods of from three to five weeks each, * * * taking charge of the house, running it themselves, and being held responsible for results.

The dormitory will also be used for some practice work. Stevens Point Normal School offers also a rural school course in domestic science and domestic art, including two periods a week of cooking and the same amount of sewing.

The general plan of the Wisconsin normal schools of providing some instruction in household arts in every normal school and a complete department for the training of special teachers in a single school is to be commended. One might suggest as a minimum of instruction in household arts for all normal students in every normal school the instruction in cookery and sewing of the rural school course at Stevens Point. It represents the minimum amount of teaching in household arts which every grade teacher should be ready to impart.

Section 3. CURRICULA IN OTHER NORMAL SCHOOLS.

Framingham, Mass.—At the Framingham (Mass.) State Normal School is the Mary Hemenway Department of Household Arts, so called in memory of Mrs. Mary Hemenway, who established the Boston Normal School of Cookery in Boston in 1887, which was transferred by the trustees of her estate to the Framingham Normal School in 1893. The department offers a three-year course, as follows: First year—Cookery (principles and methods), chemistry (general and qualitative analysis), physics, biology, sewing, drawing, French, and English. Second year—Cookery (advanced and invalid), chemistry (qualitative and organic), physiology, sewing, drawing, French, English, psychology, laundry, teaching of cooking and sewing. Third year—Cookery, food and dietetics, dressmaking and millinery, drawing (house decoration and mechanical drawing), sanitation, emergencies, pedagogy, teaching of cooking and sewing.

One of the strong features of the department is its provision for practice teaching.

> It combines classes in sewing and cookery, coming from elementary and secondary schools. A part of the practice school is carried on in the main school building. Upon almost all school days three classes in cookery may be seen at work, each class under the direction of a senior, assisted by a member of the middle junior class. On other days the seniors instruct classes in sewing—juniors from the regular course and pupils from the schools of the practice department. All of this work is done under careful supervision. In addition to this teaching, each senior carries on independent classes in sewing and cookery in Framingham and in many of the neighboring cities and towns. These classes are made up from elementary and secondary schools. Under this plan the members of the senior class have a full year's experience in teaching one or more classes; and the members of the middle junior class have a year of observation and assisting which prepares them in a measure for their teaching in the senior year.

Farmington (Me.) Normal School.—Under the Maine law providing aid for household-arts education the teaching of some household arts is required in every normal school, and the department which had been established at the Farmington Normal School in 1911–12 was extended to a third year in 1913 for the training of supervisors of household-arts teaching. The two-year course adds to the regular normal-school curriculum one year of cooking, with marketing, household accounts, management, and housewifery; and one year of elementary sewing, garment making, and dressmaking. The third year as outlined provides a full-time curriculum of advanced cookery and sewing, food production and manufacture, dietetics, laundry work, millinery, theory and practice of domestic science, practice teaching, and academic work.

The experience of the Farmington Normal School in the matter of equipment will be suggestive. There was no room for household-arts laboratories in the normal building, so a near-by cottage was secured. While the cooking and sewing classes have been crowded, there has been a remarkable interest shown by the students. The house does not provide dining room and bedrooms for housewifery practice, so the use of private rooms has been secured for the purpose. The director of the work writes:

> Though we have been and are laboring under disadvantages, we are looking for something better. The girls are very much attached to our cottage, for they say it seems so "homey." Our work is growing so rapidly that we plan to ask the next legislature for money for a new building. Besides laboratories for sewing and cooking, I wish to have a suite of rooms to use as living quarters for the teachers of the household-arts department. These we shall use for practical demonstrations of the running of the home. We give instruction in sewing and cooking from the fourth grade through the ninth in the model

schools, and are using some of the outside schools for practice classes. I hope by another year to introduce some work into the rural schools around us.

Macomb (Ill.) Normal School.—The possibilities of household arts in the curricula of a normal school are well illustrated in the requirements for various diplomas at the Western Illinois State Normal School at Macomb. The school offers: (I) A normal diploma with varied requirements which include three credits in "the school arts"; of these one may be chosen in household arts, which appears as an elective in the second and third term of the junior year of this standard normal course. (II) A country school training certificate for teachers of rural schools, requiring 18 credits, of which household arts to the amount of 1 credit is required in the first term of a two-year course. (III) An academic diploma for which 32 credits are required, of which 10⅓ are prescribed and 21⅔ elective; in the elective credits household courses may be chosen for from two-thirds to 2 credits.

The individual courses offered at Macomb are as follows: In the normal department a course in "domestic science and art in the grades"; in the country-school course, six weeks' instruction in cooking and six weeks in sewing; in the academic department, separate courses in cooking and in sewing; and in the postgraduate courses (which are offered in household arts, library economy, manual training, and physical education, only), there are provided the following in household arts: Application of heat to food materials (two courses), textiles, and the house, and in addition eight courses open to household-arts students, but listed, respectively, as drawing, design, chemistry, agriculture, home nursing, and education.

California State Normal School of Manual Arts and Home Economics.—The State of California has recently taken over as a State school the Anna Blake City Normal School of Manual Arts and Home Economics at Santa Barbara, which is the single instance of a State normal school exclusively devoted to industrial and domestic teaching. Instruction is offered in both domestic science and domestic art. The entrance requirement is two or more years' training in a college, normal or special school, or successful teaching experience. The diploma of the school entitles the holder to the special certificate, both to teach and supervise.

Section 4. THE NORMAL SCHOOL AND THE RURAL PROBLEM.

The rural school department in the normal school.—The normal schools of the country are beginning to recognize that the rural-school problem is concerned largely with the teaching of agriculture and home economics. A special department to deal with the rural-school problem, giving due attention to the rural home, has been established in several normal schools—first in the Illinois State

Normal at Macomb a few years ago and since copied in the organization of other schools. Miss Mabel Carney, who was connected with the pioneer work at Macomb as the training teacher in the district practice school and later director of the country school department at the Illinois State University, in writing of this matter, says:

> There should be in the first place a special department of the normal school devoted to country-school interests. * * * The course offered for this department had best be two years in length, the standard for entrance being as high as possible. * * * Contiguous with this course should be offered another, also of two years' duration, for graduates of the tenth grade. As the standard of the department rises, it should be possible to discard the more elementary course and supplant it by the advanced one, as has been done at Kalamazoo, Mich. Eventually there should be introduced also a special advanced course of regular normal-school rank for the preparation of teachers for high-salaried country schools, consolidated schools, normal departments in high-schools, and other special phases of rural education.[1]

Rural extension work, Harrisonburg (Va.) State Normal School.—The Harrisonburg (Va.) State Normal School, established in 1909, is conducting notable extension work, especially in household arts and manual arts in rural schools, by sending its senior students for practice work into these schools under the direction of Miss Rhea C. Scott, special supervisor of the normal-school faculty in charge of rural education.

Miss S. Frances Sale, of the department of household arts in the normal school, furnishes the following details:

> The members of the senior class, who are working for diplomas in the household arts and industrial arts courses, go to the rural schools once a week for practice teaching. Seven of the largest schools in the county and two small schools have invited us to teach sewing, cooking, and manual arts for them, and over 600 children in the county are doing this work. The young women, after making lesson plans, drive out with the rural supervisor and usually spend the day; or if the school is near, they get back in half a day. Two, three, or even four young women go to the same school on the same day. It depends on the number of classes wanting the industrial work. Some of the classes contain 20 children. The practice teachers are excused from the work they miss while they are in the country, but are held responsible for its preparation. The greatest problem we have is the arrangement of the schedule so that the girls will lose as little time as possible from their normal classes. The teachers teach two, three, or even four classes a day, organize "bread clubs" among the girls, help in patrons' leagues, in getting up entertainments for raising money for the improvement of the school equipment, etc. They visit in the homes where an opportunity offers itself, study the community, and are encouraged to take as active a part in the improvement of the school surroundings as possible. A number of the schools have bought their own equipment. They gave entertainments in order to make the money. Some schools had "kitchen showers." The normal school bought one small equipment when the work was begun three

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[1] Carney, Mabel. Country Life and the Country School. Chicago, Row, Peterson & Co. 1912, pp. 408.

years ago. This equipment is used in one school. The materials are all furnished by the children in both cooking and sewing. We have had no difficulty in getting the things we want. In sewing, the completed article is the property of the child making it. We try to select such things as will be of interest and use to the child. For cooking, a list is given to the regular teacher, and she gives it to the children the day before the class comes. They take turns furnishing the materials.

In manual arts we encourage the use of native materials when it is possible—honeysuckle, willow, and white-oak splits for baskets and mats; dry-goods boxes for problems in woodwork; natural dyes for coloring rags for rugs and staining wood. The normal school owns a chest of tools costing $8.31, which is taken from school to school. It has been in use three years, and is still in good condition.

Near the normal school is a one-room rural school in a very poor community. This has been made into a community school. The people in the neighborhood have worked hard to help in every way to raise the money to add a room for industrial work. This room will be used for classes in sewing, cooking, woodwork, basket making, weaving, etc. In the afternoons and evenings the women will go for lessons in subjects related to the home. A night school, meeting two nights every week, has been in progress since early fall. The regular teacher, an enthusiastic little woman, teaches the night classes.

The people of the county are very much interested in the different phases of the industrial work and are begging for it.[1]

Section 5. APPLIED SCIENCE, RELATED TO HOUSEHOLD, IN NORMAL SCHOOL.

The possibilities of applying science instruction to practical problems, many of which are of home concern, in schools where no household science as such is taught, is illustrated by the chemistry instruction given in the Westfield (Mass.) Normal School by Lewis B. Allyn. The students are taught—

to appreciate properly their own bodies and to guard themselves against the quack nostrums and questionable remedies of daily life. Foods, beverages, drugs, and medicines are analyzed and helpful as well as harmful properties determined. A knowledge of the dangerous effects of acetanilid preparations has well-nigh driven out the use of grippe and headache powders among the students of this school; while the fact that the local board of health[2] depends in some measure upon analyses made by students in this course gives importance to the tasks undertaken, fosters care in the working habits of students, and inspires them with the sense of responsibility which every good citizen should have. The analysis of water and milk; the determination of the amount of alcohol in patent medicines, "soft drinks," and other beverages; the search for coal-tar products, etc.—these are other applications of the efforts made to provide for the physical well-being of students through a knowledge of chemical laws; while the removal of stains, the preparation of essences, perfumes, etc., and correlation with the department of manual arts, whereby materials to be used in that department are dyed or otherwise prepared, are illustrations of the "practical" turn given this science, whereby a considerable saving of money to the student is made possible. It is believed that the knowledge thus gained through the missionary work of students who become teachers will reach thousands of pupils to their permanent advantage. In a word, the aim of this course is to create, if necessary, and to foster a real interest in the great science of chemistry; to give a broader outlook on life, and to create a belief that every teacher is a real factor in the busy, living world; and to furnish the thoughtful, painstaking student with information by which she can keep both body and mind in an alert, healthy condition.[1]

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[1] For further information as to the work of the Harrisonburg Normal School, see the following: Normal Bulletin, January, 1912, "Suggestions for rural schools"; Supplement to Normal Bulletin, November, 1912, "Suggestions for rural schools—household and manual arts"; Normal Bulletin, January, 1913, "Leisure for farm women"; Rockingham County school bulletin, Harrisonburg, January, 1913, "Things that all country children should know and do, by the children of the schools"; "Lessons in cooking and sewing for Virginia school girls," issued by the State department of education, 1912, prepared and edited by S. Frances Sale, of the Harrisonburg Normal School.

[2] See List of Recommended Foods, published by the Westfield (Mass.) Board of Health; 10 cents.

Section 6. TRAINING OF TEACHERS IN HOME ECONOMICS IN INSTITUTIONS OTHER THAN NORMAL SCHOOLS.

The city training school for teachers.—The city training school for teachers, the special function of which is to prepare grade teachers for the local schools, must in time give space for home-economics instruction in its curriculum. The problems of the city are in large part living problems, which center in the home—adequate nutrition, a clean and well-kept house, and intelligent child care—these the city grade teacher must help solve. The household-arts subjects are sure to enter the training-school curriculum. Some of the best opinion to-day favors the teaching of all household and other arts subjects in the first six grades by the regular class teacher, and sewing has usually been so taught. The Paterson (N. J.) Normal Training School requires a 10-hour sewing course, and the Elizabeth (N. J.) Normal and Training School an 80-hour course. Courses in food, management, and economy should find a place, too, in city training schools as valuable general equipment for the grade teacher. The Chicago Normal College, the teachers' training school of the city of Chicago, offers a two-year training course for special teachers in its department of household arts, which graduated 16 teachers in 1913 and 24 in 1914. Persons who enter must have had two years of food work and textile work in high school. College graduates are admitted for a one-year course, and 10 such students are in attendance this year. In addition, 50 special students are taking courses. A staff of two teachers in the college and six in the practice school are employed. So far the household-arts courses have not been opened to persons preparing for grade teaching. The college is just completing an arts building, one floor of which is devoted to household arts with the following laboratories: Laundry, two cooking laboratories, dining room, chemical laboratory, millinery room, dye room, textiles, garment making, dressmaking, demonstration apartment, and classrooms. The provision for household arts in the Chicago Normal College may serve as an example to other cities. The Washington (D. C.) Normal School No. 2 (colored) is another example of progressive work in household arts. A two-year course is offered, six periods a week for 50 weeks, followed by 18 weeks of practice work. A science laboratory and a four-room apartment comprise the special equipment. Last year 117 students took instruction, and 14 special teachers of household arts were graduated (8 the year before). Graduates of the school have been in demand elsewhere. Household arts is prescribed for all intending grade teachers.

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[1] Announcement, State Normal School, Westfield, 1912–13, p. 25. See, also, Allyn, "Elementary Applied Chemistry," Ginn.

County training school for teachers.—Wisconsin has a system of secondary county training schools which prepare rural teachers. Home economics is offered in varying amount in different schools—sewing alone in 3 schools from which reports were received, with 50 to 100 hours of instruction; 2 schools reported both cooking and sewing, 1 about 37 hours of each, the other, the Green Lake County Training School, at Berlin, giving 200 hours to elementary cooking and elementary sewing, respectively, and 50 hours to advanced cooking and advanced sewing, respectively, a total of 500 hours in household arts. This amount, which is about one-sixth less than the mean hours of instruction in household arts given in State normal schools, seems a reasonable standard for these secondary normal schools.

High-school normal training courses.—Training classes in high schools afford an additional method of preparing teachers for public-school work. The school-teacher went originally from her own schooling directly into the teaching position, and the normal schools, teachers' colleges, and similar institutions are modern devices to increase the efficiency in teaching. The normal training class in high schools is the first step toward organized professional preparation. Numerically, however, it is still one of the most important recruiting grounds for the teaching staff of the schools, especially for grade teachers in smaller places and for rural teachers. In equipping teachers to give instruction in home economics it is therefore important that the training classes in high schools should include the household arts in their curriculum. Iowa and certain other States have made this provision. In Iowa 80 per cent of the rural teachers come from high schools, and half of these have had less than a four-year high-school course. Their average term of service is only three or four years, so that in that State alone 3,000 rural teachers are recruited every year from the high-school training classes. This State sees the importance of including agriculture and home economics in the course of training for these teachers, to the end that "agriculture and domestic economy will, in a degree at least, be taught in all rural schools." A half year of home economics is required in the third year of the high-school course. Five periods a week are given, including two 45-minute recitation periods, two 90-minute laboratory periods, and one 45-minute sewing lesson. The subjects of sewing, personal hygiene, home and school sanitation, as well as food, are included in the course of study. The syllabus is an excellent one, remarkably comprehensive, notwithstanding the short period allotted for instruction. Detailed outlines of lessons are given, with suggestions as to equipment, the teacher's preparation for class work, housekeeping duties in the school, methods of teaching, etc.[1]

Boys taking the training course are permitted to substitute additional agriculture for the domestic science. One might question this provision, in view of the fact that it is desirable for domestic science to be taught in all rural schools, and the man teacher as well as the woman will find it possible to introduce simple instruction at least.

Summer schools.—Summer schools for the training of teachers, providing opportunities for household arts as well as in other subjects, have been held for the State of Pennsylvania, at Mount Gretna, and by the State of New Jersey, at Cape May. Among the newer opportunities for summer study relating to the home should be mentioned the summer sessions of the secondary schools of agriculture and domestic economy, as illustrated by the summer camp school at the Milwaukee County School of Agriculture and Domestic Economy, at Wauwatosa, Wis. (For college summer schools see p. 83, of Part III of this report, Bulletin, 1914, No. 38.)

Instruction in teachers' institutes.—Instruction in teachers' institutes or temporary schools of instruction for teachers, lasting from one day to a week or longer, is one strategic method of securing the introduction of a new subject like household arts into schools.

New Hampshire, which has as yet adopted no special legislation regarding vocational or industrial education, has used this among other methods of encouraging the teaching of household arts and other applied sciences and arts. The New Hampshire "Institute Circular, No. 1, Series 1912–13, Suggestions to Domestic-Arts Teachers—Canning, Preserving, Pickling, etc.," and "Institute Circular 5, Series 1913–14, Cooking as Means and End in Education," are noteworthy, the latter for an excellent discussion of educational values in cooking instruction, which lays emphasis on the dining-room table and the whole meal as a unit problem in teaching, and on the economic aspects of food.

Tennessee published, in 1913, "A Brief Course in Domestic Science for State Institutes," arranged under the direction of Prof. Catherine A. Mulligan, of the University of Tennessee, outlining 20 lessons in cookery, with recipes and references to Government bulletins and other easily available sources, together with other lessons in sewing, laundering, sanitation, etc., including the rural-school lunch. This course, extending through three weeks, was taught in 1913 by five graduates of the university to several hundred teachers at each summer institute. The lessons are intended to be repeated in village and rural schools.

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[1] State of Iowa, Department of Public Instruction, Normal Training Course for Four-Year High Schools. 1913, pp. 60–176.

The institute manuals of other States are emphasizing the same kind of instruction, and the provision of the New Mexico law of 1912 authorizing "a course of study in industrial education" to be outlined in the institute manual, and an examination in one or more branches of industrial education to be required of all teachers attending county institutes and summer normal schools, is undoubtedly a wise standard.

Other institutions for training teachers.—Reference should also be had to the chapter following for description of private technical institutes which give preparation for teaching (p. 139) and to parts of the chapter on colleges which deal with the training of teachers of home economics in colleges (p. 83 in Part III of this report, Bulletin, 1914, No. 38.)

Section 7. STATE NORMAL SCHOOLS TEACHING HOME ECONOMICS.

Home-economics courses are now offered in practically all of the 170 or thereabouts public State normal schools. At any rate, such instruction was in 1914–15 reported by the following 154 State normal schools. Of this number, 92 furnished in 1912–13 a detailed statement as to their curricula in household arts, and these statements are the basis of the deductions as to normal-school instruction offered (pp. 131–138).

There is a tendency for the State normal schools to develop their curricula which are usually two years in length into four-year collegiate and professional curricula, and thus for "normal schools" to become "normal colleges" or colleges for teachers. The following institutions have thus been organized upon a level above the typical normal school; State Teachers' College of Colorado, Greeley, Colo.; Iowa State Teachers' College, Cedar Falls, Iowa; New York State Normal College, Albany, N. Y.; and the normal colleges of Ohio located, respectively, at Ohio University, Athens, Ohio, and at Miami University, Oxford, Ohio. These institutions should be included in a complete tabulation of the State normal institutions for training teachers.

Alabama:
- Daphne State Normal School, Daphne.
- State Normal School, Florence.
- Jacksonville State Normal School, Jacksonville.
- State Normal School, Livingston.
- State Normal School, Montgomery.

Alabama—Continued.
  State Normal School, Moundsville.
  State Agricultural and Mechanical College for Negroes, Normal.
  Troy State Normal School, Troy.
  Tuskegee Normal and Industrial Institute, Tuskegee.
Arizona:
  Tempe Normal School of Arizona, Tempe.
Arkansas:
  Arkansas State Normal School, Conway.
  Branch Normal College, Pine Bluff.
California:
  California State Normal School, Chico.
  Fresno State Normal School, Fresno.
  Los Angeles State Normal School, Los Angeles.
  San Diego State Normal School, San Diego.
  San Jose State Normal School, San Jose.
  State Normal School of Manual Training and Home Economics, Santa Barbara.
  San Francisco State Normal School, San Francisco.
Colorado:
  State Teachers College of Colorado, Greeley.
  Colorado State Normal School, Gunnison.
Connecticut:
  State Normal Training School, Willimantic.
District of Columbia:
  Washington Normal School No. 2, Washington.
Georgia:
  State Normal School, Athens.
  Georgia Normal and Industrial College, Milledgeville.
  South Georgia State Normal College, Valdosta.
Idaho:
  State Normal School, Albion.
  State Normal School, Lewiston.
Illinois:
  Southern Illinois State Normal University, Carbondale.
  Eastern Illinois State Normal School, Charleston.
  Northern Illinois State Normal School, De Kalb.
  Western Illinois State Normal School, Macomb.
  Illinois State Normal University, Normal.
Indiana:
  Normal Training School, Indianapolis.
  Indiana State Normal School, Terre Haute.
Iowa:
  Iowa State Teachers College, Cedar Falls.
  Western Normal College, Shenandoah.
Kansas:
  Kansas State Normal College, Emporia.
  Fort Hays Kansas Normal School, Hays.
  Kansas State Manual Training School, Pittsburg.
Kentucky:
  Western Kentucky State Normal School, Bowling Green.
  Eastern Kentucky State Normal School, Richmond.
Louisiana:
  Louisiana State Normal School, Natchitoches.

A. PRACTICE COTTAGE, STATE NORMAL SCHOOL, FARMINGTON, ME.

B. INTERIOR VIEW, PRACTICE COTTAGE, STATE NORMAL SCHOOL, FARMINGTON, ME.

Maine:
- Eastern State Normal School, Castine.
- Normal School, Farmington.
- Western State Normal School, Gorham.
- Madawaska Training School, Fort Kent.
- Washington State Normal School, Machias.
- Aroostook State Normal School, Presque Isle.

Massachusetts:
- State Normal School, Framingham.
- Hyannis Normal School, Hyannis.
- State Normal School, North Adams.
- State Normal School, Salem.

Michigan:
- Western State Normal School, Kalamazoo.
- Northern State Normal School, Marquette.
- Central State Normal School, Mount Pleasant.
- Michigan State Normal College, Ypsilanti.

Minnesota:
- State Normal School, Duluth.
- State Normal School, Mankato.
- Moorhead State Normal School, Moorhead.
- State Normal School, St. Cloud.
- Winona State Normal School, Winona.

Mississippi:
- Mississippi Normal College, Hattiesburg.

Missouri:
- State Normal School, Cape Girardeau
- Lincoln Institute, Jefferson City.
- State Normal School, Kirksville.
- Northwest Normal School, Maryville.
- Missouri State Normal School, Springfield.
- Missouri State Normal School, Warrensburg.

Montana:
- Montana State Normal School, Dillon.

Nebraska:
- State Normal School, Chadron.
- State Normal School, Kearney.
- State Normal School, Peru.
- State Normal School, Wayne.

New Hampshire:
- State Normal School, Keene.
- Plymouth Normal School, Plymouth.

New Jersey:
- New Jersey State Normal School, Trenton.

New Mexico:
- New Mexico Normal University, Las Vegas.
- New Mexico Normal School, Silver City.

New York:
- New York State College for Teachers, Albany.
- State Normal and Training School, Brockport.
- State Normal School, Buffalo.
- State Normal School, Cortland.
- State Normal School, Geneseo.

New York—Continued.
- State Normal School, New Paltz.
- Oneonta Normal School, Oneonta.
- State Normal School, Plattsburgh.
- State Normal and Training School, Potsdam.

North Carolina:
- Cullowhee Normal and Industrial School, Cullowhee.
- State Colored Normal School, Elizabeth City.
- State Colored Normal School, Fayetteville.
- State Normal and Industrial College, Greensboro.
- East Carolina Teachers' Training School, Greenville.

North Dakota:
- State Normal-Industrial School, Ellendale.
- State Normal School, Mayville.
- State Normal School, Valley City.

Ohio:
- State Normal College, Athens.
- State Normal School, Bowling Green.
- State Normal School, Kent.
- State Normal College, Oxford.

Oklahoma:
- East Central State Normal School, Ada.
- Northwestern State Normal School, Alva.
- Southeastern State Normal School, Durant.
- Central State Normal School, Edmond.
- Northeastern State Normal School, Tahlequah.

Oregon:
- State Normal School, Monmouth.

Pennsylvania:
- State Normal School, Bloomsburg.
- Southwestern State Normal School, California.
- State Normal School, Clarion.
- State Normal School, East Stroudsburg.
- Northwestern State Normal School, Edinboro.
- State Normal School, Indiana.
- Keystone State Normal School, Kutztown.
- Central State Normal School, Lock Haven.
- State Normal School, Mansfield.
- State Normal School, Millersville.
- Cumberland Valley State Normal School, Shippensburg.
- Slippery Rock State Normal School, Slippery Rock.
- State Normal School, West Chester.

Rhode Island:
- Rhode Island State Normal School, Providence.

South Carolina:
- Colored Normal Agricultural and Mechanical College of South Carolina, Orangeburg.
- Winthrop Normal and Industrial College, Rock Hill.

South Dakota:
- Northern Normal and Industrial School, Aberdeen.
- State Normal School, Madison.
- Spearfish State Normal School, Spearfish.
- State Normal School, Springfield.

Tennessee:
- East Tennessee State Normal School, Johnson City.
- West Tennessee State Normal School, Memphis.
- Middle Tennessee State Normal School, Murfreesboro.
- State Agricultural and Industrial Normal School for Negroes, Nashville.

Texas:
- West Texas State Normal College, Canyon.
- North Texas State Normal College, Denton.
- Sam Houston State Normal Institute, Huntsville.
- Prairie View State Normal and Industrial College, Prairie View.
- Southwest Texas State Normal School, San Marcos.

Vermont:
- Castleton State Normal School, Castleton.
- State Normal School, Johnson.

Virginia:
- State Female Normal School, Farmville.
- Fredericksburg State Normal and Industrial School, Fredericksburg.
- Hampton Normal and Industrial Institute, Hampton.
- State Normal and Industrial School for Women, Harrisonburg.
- Virginia Normal and Industrial Institute. Petersburg.

Washington:
- Bellingham State Normal School. Bellingham.
- State Normal School, Cheyney.
- State Normal School, Ellensburg.

West Virginia:
- Concord State Normal School, Athens.
- Fairmont State Normal School, Fairmont.
- Glenville Normal School, Glenville.
- Marshall College, Huntington.
- West Liberty State Normal School, West Liberty.
- West Virginia Colored Institute, Institute.

Wisconsin:
- State Normal School, La Crosse.
- State Normal School, Milwaukee (summer course only).
- State Normal School, Oshkosh.
- River Falls State Normal School, River Falls.
- Stevens Point Normal School, Stevens Point.
- Superior State Normal School, Superior.
- State Normal School, Whitewater.

Wyoming:
- State Normal School, Laramie.

Section 8. DATES OF INTRODUCING HOME ECONOMICS INTO STATE NORMAL SCHOOLS.

By combining data secured by Miss Susannah Usher in 1909–10 and that secured for this study in 1912 the year of introducing home economics into some 86 public normal schools was obtained. Prior to 1900, of 12 normal schools which had introduced this teaching, 5 were for colored students only, 3 for whites only, and 4 for both races. All but four of these institutions were in the South. These normal schools, which merit note for early recognition of this subject, are as follows: Jacksonville (Ala.) Normal (for whites), 1883;

Agricultural and Mechanical College for Negroes, Normal, Ala., 1883; Kentucky Normal and Industrial Institute for Colored Persons, Frankfort, 1890; State Normal and Industrial College (for white women), Milledgeville, Ga., 1891; State Normal and Industrial College (for white women), Greensboro, N. C., 1892; Winthrop Normal and Industrial College (for white women), Rock Hill, S. C., 1895; State Teachers' College, Greeley, Colo., 1895; Branch Normal School (for negroes), Pine Bluff, Ark., 1897; Lincoln Institute (for negroes), Jefferson City, Mo., 1897; State Normal School, Providence, R. I., 1898; State Normal School, Framingham, Mass., 1898; State Normal School, Reno, Nev., 1899.

The number of normal schools introducing home-economics courses in successive years has been as follows: 1883, two schools; 1890, one school; 1891, one; 1892, one; 1895, two; 1897, two; 1898, two; 1899, one; 1901, four; 1902, four; 1903, two; 1904, three; 1905, three; 1906, three; 1907, five; 1908, six; 1909, eighteen; 1910, eight; 1911, thirteen; 1912–13 (in part), five.

The subject is now taught in all but perhaps 10 of the public normal schools. Miss Usher found that household science in some form was taught in 1909–10 in 96 of 150 normal schools from which data were secured (the total number of normal schools being then placed at 168). Miss Spethman, of the United States Department of Agriculture, compiled in 1911 a list of normal schools teaching home economics, 102 schools in all, which included 82 State normal schools.[1]

Miss Usher's detailed facts for 1909–10 were as follows:

TABLE 17.—*Household science in State normal schools, 1909–10.*

Normal schools.	Teach household science.	Do not teach household science.	Not reported on.
Normal schools	62	47	4
Normal schools for whites only	20	6	12
Normal schools for negroes and Indians	14	1	2
Total schools (168)	96	54	18

The leadership of the South in introducing home economics into higher institutions has never before been made evident. The introduction into negro schools was doubtless with a primarily industrial aim, but the similar introduction into the institutions for white women at Jacksonville, Ala.; Milledgeville, Ga.; Rock Hill, S. C.; and Greensboro, N. C., antedated by several years recognition in similar institutions elsewhere, and was for purposes of general higher education as well as for preparation for teaching. In allotting credit for early normal training, one must not overlook the normal class at the Boston Cooking School, taught by Miss Maria Parloa in 1880–81, apparently the first American school to train teachers of cooking, and continued for several years under other teachers; and the Boston Normal School of Cookery, established in Boston by Mrs. Mary Hemenway in 1887, and transferred in 1898 to the Framingham (Mass.) State Normal School; nor, similarly, private foundations like Pratt Institute, Brooklyn (1887), and Teachers College, New York (1888).

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[1] Journal of the Home Economics, Baltimore, 1911, p. 274.

The date of establishing the special diploma in household-arts teaching is stated by 37 normal schools. The earliest date stated is Kalamazoo, in 1904. The dates and the number of schools established each year are as follows: 1904, two schools; 1907, one; 1908, four; 1909, three; 1910, seven; 1911, ten; 1912, seven; 1913 (part of year), three.

Section 9. TIME ALLOTMENTS IN NORMAL-SCHOOL CURRICULA IN HOME ECONOMICS.

(A) *Time allotments by subjects or topics.*—Of 92 public normal schools furnishing data as to hours of instruction in home-economics courses, 83 report (column 2, Table 18) courses in elementary cooking, 64 in advanced cooking, 26 in cookery for the sick, 50 in food chemistry, and 44 in nutrition and dietaries; a total of 267 food courses. Similarly, there were reported 82 courses in sewing, 50 in dressmaking, 24 in millinery, 28 in textiles, and 12 in costume design; a total of 196 clothing courses, which is about one-fourth less than the number of food courses. In other divisions of home economics, instruction was reported as follows: Household management in 31 normal schools; accounts in 13; housewifery, 11; home nursing, 22; care of children, 4; laundering, 15; household sanitation (bacteriology), 31; house decoration, 27; preparatory courses for nurses, 7; household mechanics, 1—a total of 182 courses or parts of courses, which (as was the case in high-school curricula, p. 106) compares favorably for this recent group with the 196 courses in clothing and 267 in food. In addition to these technical courses in household arts many schools offer instruction in the "special methods" of teaching household arts (see p. 137).

The relative importance of these technical courses in home economics is suggested by the number of institutions giving instruction as just cited; it is better measured by the number of hours of instruction actually given in these subjects (columns 3, 4, 5, 6 of Table 18). The accompanying table states (1) the minimum and maximum hours of instruction given in any institution for each of these subjects; (2) the median or mean hours of instruction given in each subject as the most typical single figure representative of the actual practice of the various schools; (3) the two limiting numbers which, when the hours of instruction for a given subject in various schools are arranged in order of size, will include between themselves the middle half of the schools, i. e., one-half of the numbers just above and just below the median value; and (4) the modes, or those numbers of hours for which instruction is more commonly given than for other numbers of hours.

Of these representative numbers the medians may be noted here as indicating the relative time alloted different subjects. These typical hours for the food courses (mean hours) are as follows: Elementary cooking, 120 hours; advanced cooking, 144 hours; cooking for invalids, 45 to 60; food chemistry, 72 to 80; nutrition and dietaries, 60 hours. In other words, were a normal school to give typical courses in all of these subjects, which are offered in any normal school, it would need to provide, on such an ideal basis, 424 hours of instruction in food courses. Similarly, these typical median hours of instruction in clothing courses are as follows: Sewing, 100 hours; dressmaking, 144; millinery, 74 to 76; textiles, 45 to 48; and costume design, 60. A normal school giving typical courses in all these clothing subjects would have to provide 452 hours of instruction in clothing. Similarly, typical normal-school courses in the third division of home economics are indicated by the following mean hours of instruction: Course on the house, 50 hours of instruction; household management, 40 hours; accounts, 45; housewifery, 30; home nursing, 45 to 48; care of children, 24 to 36; laundry, 45; household sanitation (bacteriology), 60; house decoration, 60; preparatory courses for nurses, 60; household mechanics, 24 hours; a total of 490 hours of instruction required if a normal school were to give typical courses in all of these subjects. In the normal schools, therefore, this third division of home economics represents subject matter slightly more extensive than the food courses (424 hours) and the clothing courses (452 hours). Were all of these normal-school courses to be presented in typical form (as expressed by the mean hours of instruction actually given in these subjects), there would be required a total of 1,766 hours of instruction. It is noteworthy that this is 83 per cent more than the sum of the mean hours of instruction given in typical high-school courses in home economics (963 hours, see p. 105), an indication that the normal-school instruction is, as it should be, upon a distinctly higher level than high-school instruction. This ideal total of 1,766 hours of instruction in household arts, secured by combining in a single normal school all the household courses given in any normal school, should be compared with the actual total hours of instruction given, stated in the paragraph below as a mean of 600 to 608 hours.

TABLE 18.—*Public normal schools—Hours of instruction in home-economics subjects—General tendencies.*

Subjects.	Number of courses reported.	Minimum and maximum hours reported.	Median—hours of instruction.	Limits, in hours, which include half the courses.	Modes—hours of instruction.
Cooking, elementary	83	18–560	120	72–180	120, 144, 180
Cooking, advanced	64	36–900	144	90–120	144, 180
Cooking for invalids	26	10–140	45–60	30–72	60
Food chemistry	50	4–360	72–80	38–120	60, 120
Nutrition and dietaries	44	9–216	60	40–90	60, 72
Sewing	82	4–972	100	45–180	60, 80, 144, 180
Dressmaking	50	7–972	144	64–216	60, 144, 180
Millinery	24	20–216	72–76	60–144	60
Textiles	28	5–100	45–48	36–60	36, 60
House	27	20–280	50	36–66	60
Household management	31	5–280	40	25–72	24, 36, 40, 90
Household accounts	13	12–280	45	25–76	....
Housewifery	11	5–280	30	18–40	30
Home nursing	22	20–96	45–48	38–60	45, 60
Care of children	4	20–60	24–36	24–36	....
Laundering	15	18–1,744	45	24–68	....
Sanitation	31	4–448	60	40–90	60
House decoration	27	18–180	60	40–90	60
Costume design	12	19–140	60	48–100	....
Nurses, preparatory	7	22–864	60	36–280	60
Household mechanics	1	24	24	....	24

(*B*) *Total hours of instruction allotted home economics.*—Data from 92 public normal schools show that the total hours of instruction in home economics offered vary from a minimum of 4 or 5 hours in one school to a maximum of 5,458 hours in another school. (Total hours are secured by multiplying for each course the number of hours per week by the number of weeks that instruction is given, and summing the totals for all courses in a school.) The medium number of hours is 600–608, and half of the schools give between 20 and 1,020 hours of instruction in household subjects. The three institutions giving the unusual time allowances of 2,889 hours, 5,180 hours, and 5,458 hours are, respectively, the West Virginia Colored Institute, at Institute; the Colored Normal, Industrial, Agricultural, and Mechanical College of South Carolina, at Orangeburg; and the Tuskegee Normal and Industrial Institute, at Tuskegee, Ala. The distribution of the total hours of instruction is given in abbreviated form.

TABLE 19.—*Total hours of home economics in public normal schools.*

Total hours of instruction offered.	Normal schools so offering.
1–49	5
50–99	4
100–149	3
150–199	9
200–249	9
250–299	2
300–349	0
350–399	2
400–449	3
450–499	3
500–549	2
550–599	2
600–649	6
650–699	1
700–749	4
750–799	2
800–849	2
850–899	0
900–949	2
950–999	3
1,000–1,049	2
1,050–1,099	3
1,100–1,149	0
1,150–1,199	3

Total hours of instruction offered.	Normal schools so offering.
1, 200–1, 249	2
1, 250–1, 299	0
1, 300–1, 349	1
1, 350–1, 399	0
1, 400–1, 449	5
1, 506	1
1, 560	1
1, 584	1
1, 600	1
1, 640	1
1, 908	1
2, 035	1
2, 889	1
5, 180	1
5, 458	1

Section 10. HOME ECONOMICS IN NORMAL SCHOOL CURRICULA—REQUIRED OF GENERAL STUDENTS; ELECTIVE; SPECIAL-DIPLOMA COURSE.

(*A*) *Required home-economics subjects in general curriculum.*—Of 72 normal schools reporting, 44 (61 per cent) require all students preparing to teach to take some instruction in home economics, as part of their general preparation, while 28 schools (39 per cent) make no such requirement. In 29 cases a course in cooking is required, and in 27 cases, sewing; while other subjects are required, as follows: Dressmaking and house sanitation, each, by four schools; "domestic science," by three schools; hygiene, home nursing, nutrition, and household design, each required by two schools; and housewifery, euthenics, laundry, domestic art, the house, and household economics, each by one school. The requirement of the Springfield (Mo.) Normal School that each intending teacher shall take a course in home economics or in agriculture is worth citing. Such a requirement may be recommended to normal schools as opening the way for some instruction by the regular teacher in these important living arts in a community, without the necessity of waiting for a special teacher to be provided. The fact that probably one-half of the normal schools which teach home economics (nearly two-thirds of those replying to the question) require all intending teachers to take one or more courses in home economics agrees with the legal requirement in several States regarding the course of study in teachers' training classes, that it must include home economics, and the requirement in four States that household arts shall be taught in every public school. The subject may doubtless well be required in the general preparation of every elementary school-teacher in normal school or elsewhere.

(*B*) *Elective home-economics courses.*—The percentage of general students in public normal schools who elect one or more home-economics courses was stated by 34 schools and, approximately, by 8 more; for the 42 schools the median percentage of students electing household arts was 16 per cent, and for half the schools the percentage lies between 10 and 50 per cent. In three schools all the students elect home economics, and in two more nearly all so elect, while in six schools the percentage is very small. That one-sixth the general students tend to elect home economics shows their appraisal of its value to them, either for professional or for personal reasons.

(*C*) *Courses for special diploma in teaching home economics.*—Of 87 public normal schools reporting regarding the granting of a special diploma in home economics, 54 schools (62 per cent) grant such a special diploma, i. e., train special home-economics teachers, while 33 schools (38 per cent) do not.

As to the curriculum for this diploma the following reports were made: Of 54 schools, 49 include a course in the history of education, 4 do not require it, and with 1 school it is an elective subject; all of 51 schools reporting require courses in educational psychology and general methods of teaching for this diploma; all of 50 schools reporting require a course in special method of teaching home economics; of 53 schools reporting, 49 require practice teaching of household subjects for such special diploma and 4 do not.

A question as to the amount of practice teaching brought answers from 36 schools, but answers that have no common denominator. Twenty of the answers were expressed in weeks and varied from 2 to 57 weeks, and these with the answers of the 8 other schools which require one year's practice teaching will give a quantitative measure. Of these 28 replies the median value is probably 30 weeks, but 24 weeks and 40 weeks or a year are the most common values. Probably 30 weeks of practice teaching is a representative amount. Of 6 schools measuring their practice work in hours, 120 hours is the median value; this is about equivalent to 30 weeks. The statement of certain schools that general practice teaching in the grade is required and that this is then supplemented by practice teaching of household arts is noteworthy; one school requires 12 weeks of grade teaching, followed by 24 weeks of household-arts teaching; and another one term of each. Among other subjects included in the requirements for the diploma in teaching household arts in various normal schools are ethics, social ethics, social economics, sociology, economics, and history of household economics.

The question was asked as to whether candidates for the special diploma for teaching household arts are excused from any items in the regular normal school requirements. Fifteen schools report that students are not excused from any of the regular work—i. e., graduation from the regular course is required as prerequisite to the special household-arts diploma. Nineteen schools report exceptions phrased in various ways. Four schools substitute home economics for about one-half the regular work, and the others make exemptions greater or less than this in amount. Here, then, are two standards—one requiring the general normal diploma as a prerequisite to granting the household-arts diploma, the other granting the household-arts diploma upon requirements equivalent to the regular diploma. The former is to be approved as setting higher requirements for the teacher of a special subject than for a regular classroom teacher.

Granted, however, that a higher standard is desirable, it seems possible that the higher standard may in time be expressed in some more adequate way than by requiring the general normal diploma as a prerequisite.

A question as to whether graduates with special household-arts diplomas have readily secured positions, was answered in the affirmative by 32 normal schools and in the negative by 6 schools.

Section 11. HOME ECONOMICS STAFF.

Fifty-nine normal schools reported upon their teachers of home economics as follows: Sixteen schools have one special teacher; 18 have two special teachers; 9 have three special teachers; 12 have four special teachers; and 2 have seven special teachers; in one case the matron of the school dormitory gives instruction, and in another case the manual training teacher. There is distinct progress in the amount of instruction since 1909, when, according to Miss Usher's data, 51 schools had one special teacher; 10 had two; 4 had three; 5 had four; 2 had five; and 1 school had seven. Miss Usher suggests as a standard for normal schools, "two instructors of household science, if a two-year academic course in home economics is given, and if a teacher's course is offered with practice teaching, two more would be useful for each unit of 200 to 500, or fewer students."

VI. TECHNICAL INSTITUTES AND SPECIAL INSTITUTIONS.

There remains a group of technical institutes which give some of the most important instruction in the field of education for the home. In the preparation of teachers, as well as in the vocational applications of household science and art, these institutes have rendered a great service to American education. First among them is the foundation of Charles Pratt, which bears his name, established in Brooklyn, N. Y., in 1887, when technical education was just being discussed by forward-looking educators. Pratt Institute has been a model for many similar foundations—Drexel Institute, of Philadelphia; Mechanics Institute of Rochester; Lewis Institute, of Chicago; Carnegie Institute, of Pittsburgh; and many others. These technical institutes have aided in the movement for an education for the home by helping to win the day for all technical and vocational education, and specifically by training teachers of household arts who were thoroughly competent in the practical arts as well as in the teaching art; further, by developing at equal pace the nonteaching vocations related to the household, household management itself, cooking, laundering, sewing, dressmaking, millinery, and the rest. Whether these vocations were to be practiced in the home or were to contribute to the home from outside, the institutes have been giving a practical vocational training and the home has benefited. Whatever the vocational colleges may accomplish in the distinctive household fields goes back for beginnings to the practical efficiency of the instruction of these institutes. Similarly the training of teachers of home economics in normal schools and colleges has one of its important sources here.

No attempt has been made to describe the work of all the technical institutes and special institutions which might be included here; rather, typical work as given by institutions of various types is outlined. Some of the additional institutions which should be included in any complete list would be: Hampton Normal and Industrial Institute, Hampton, Va.; Winthrop Industrial and Normal College, Rock Hill, S. C.; State School of Science, Wahpeton, N. Dak.

Section 1. PRATT INSTITUTE, BROOKLYN, N. Y.

Pratt Institute was founded "to promote industrial education, to inculcate habits of industry and thrift, and to foster all that makes for right living." It offers to both men and women day and evening courses in a wide range of artistic, scientific, mechanical, and domestic subjects, and conducts normal courses in three of its schools for the purpose of extending its ideals and increasing its influence.

It has a school of household science and arts which is one of the early higher institutions in this field (1887). While the institute does not offer the academic work of a college, its technical work is upon a collegiate level. The school of household science and arts offers training in the application of art and science to all the activities of the household. Its courses are planned to meet the needs of three classes of people—those who wish to become teachers of household science and household arts, those who wish to become workers in the trade or professional world as housekeepers, dietitians, matrons, seamstresses, dressmakers, milliners, or costume designers, and those who wish training in the varied subjects of household science and arts for use in the home.

The school occupies a large section of the main building of the institute, an adjoining three-story building, a three-story house used as a dressmaking establishment, and an additional three-story house near by used as a practice house.

The courses for teachers offered by the school are organized in a two-year curriculum in which the student may specialize either in "household science and elementary household arts" or in "household arts and elementary household science." The first year gives training in elementary household science and household arts. The second year is differentiated for the two groups of students into advanced household arts and advanced household science.

The school year is divided into three terms and the curriculum in preparation for teaching is organized as follows (the numbers indicating the terms of work for each subject):

First year, common to both courses.—Psychology, 3; chemistry, 3; physiology, 3; cookery, 3; design, 3; physics, 2; sewing, 3; household administration, 1; care of the house, 1; serving, 2; laundry work, 1; marketing, 1; physical training, 3.

Second year for those specializing in household science, with elementary household arts.—History of education, 2; theory of education, 2; methods, 3; practice teaching, 3; economics seminar, 3; chemistry, organic, 3; bacteriology, 2; fancy cookery, 1; house planning, 2; experimental cookery, 1; dietetics, 1; handwork, 3; school gardening, 1; hygiene, 1; physical training, 3.

Second year for those specializing in household arts, with elementary household science.—History of education, 2; theory of education, 2; methods, 3; practice teaching, 3; chemistry, organic, 3; costume design, 1; millinery, 2; dressmaking, 3; weaving, 1; house planning, 2; handwork, 3; physical training, 3.

In the first year the educational aspect of the work is emphasized, in the second the professional. The time allotted different subjects in the teachers' curriculum may be summarized as follows: Education, 375 hours; science, 830 hours; science applied—615 hours for household science and 165 for household arts; design, 185 hours; art applied—300 hours for household science and 750 hours for household arts.

The requirements for admission to the course for teachers are as follows: The candidate must be 19 years of age, have satisfactorily completed a high-school course of four years, including a year of inorganic chemistry and a year of physics; preparation must also include elementary physiology, a practical knowledge of sewing, arithmetic, algebra, and geometry. Examinations are set in English literature, general history, and current events. Students may be entered with advanced standing, but such a rating is not given in cookery or dressmaking, and a two-year course at the institute is required of all students. The registration in the teachers' course in 1913 was 141.

The school offers also a one-year course for institutional housekeepers in preparation—

> for the work of the matron, the institutional housekeeper, and the dietitian, where the work of the latter is the charge of a diet kitchen. It does not prepare for the teaching of dietetics. To trained nurses or prospective trained nurses it offers preparation in the subject of nutrition.

This is a course of practical training, primarily, and candidates should be—

> mature women of fair general training, with executive ability, experience in life, skill in practical housework, physical strength and endurance. Only such women as seem to possess the qualifications enumerated, which are necessary elements of success in housekeeping, are admitted to this course. A good general education, including a working knowledge of percentage, of the metric system, and of elementary physiology is essential to success in this work.

There is opportunity for specialization of the practice work in dietetics and nutrition or the problems of household and institutional management, or in lunch-room work, as desired. Each student has one week of practical work in the practical house of the school, the students working in groups, and each student in turn acting as hostess, cook, kitchen-maid, waitress, laundress, and chambermaid. All students have practice in large-quantity cooking in the institute lunch room.

This course of study in housekeeping includes the following subjects: Principles of cookery, dietetics, serving, accounts, marketing, physiology, house furnishing, chemistry, diet for children, diet for invalids, care of the house, lunch-room work, laundry work, bacteriology, fancy cookery, dietaries for families, institutional problems, hygiene, sanitation, and physical training. Three months' probationary professional service in an institution is required at the end of the nine months' course before the granting of the certificate.

The school of household science and arts also offers a number of trade courses, including the following: Sewing for trade use, 5 days a week for 3 months; dressmaking for trade use, 12 months—9 of classroom work, 5 days a week, and 3 of workroom practice, 5½ days a week; millinery for trade use, 5 days a week for 3 months; dress design and pattern making for trade use, 5 days a week for 3 months.

The school also offers a large number of part-time courses for home use, including cookery, 3 terms of 3 months each, twice a week; serving, 12 lessons; marketing, 12 lessons; laundry work, 12 lessons; household administration, 12 lessons; sewing, 3 terms of 3 months each, with 2 lessons a week; dressmaking, 3 terms of 3 months each, 2 lessons a week; and similar courses in millinery and embroidery.

Saturday morning classes are offered for school girls in cookery, serving, sewing, and shirt-waist making. Evening classes in household arts are offered as follows: Cookery for housekeepers, two classes; cookery for professional cooks, one class; serving; sewing, two classes; shirt-waist making; dressmaking, two classes; drafting and draping, two classes; millinery, two classes; and costume drawing, two classes.

Section 2. DREXEL INSTITUTE, PHILADELPHIA, PA.

Drexel Institute of Art, Science, and Industry, Philadelphia, established in 1892, offers both technical training and preparation for teaching in the fields of domestic arts and domestic science.

In the department of domestic arts, technical courses in dressmaking are offered, including the following divisions of work, each complete in itself: Hand and machine sewing course, shirt-waist course, general course in dressmaking, technical course in dressmaking (additional order work), course in weaving, course in basketry. In millinery there is provided the general course, the special course, and the technical course (for trade). Technical evening courses are also offered. The normal course in domestic arts, two years in length, combines technical instruction in sewing, dressmaking, millinery, design, and related subjects, with instruction in English, economics, psychology, methods of teaching, and practice teaching.

In the department of domestic science there are similar independent technical courses in cooking, and a normal course in domestic science for the preparation of teachers.

Section 3. MECHANICS INSTITUTE, ROCHESTER, N. Y.

Mechanics Institute, Rochester, N. Y., established a department of household arts and science in 1893. The institute offers a three-year normal course in household arts and science in preparation for teaching, high-school graduation being required for entrance. A summer session is also provided. Professional nonteaching courses are offered as follows: A one-year certificate course in household arts is offered to girls 16 years of age or older having at least grammar-school training; a trade dressmaking course and a dressmaking apprentice course open, respectively, to young women of 16 and 15 years of age; two professional courses related to food-administration are offered—the lunchroom management course (see below), and the dietetics course, the latter open to women 24 years of age who are high-school graduates and who wish to equip themselves for work in hospitals. Another professional course, in the care of infants, is offered to girls 16 years of age or over, in conjunction with the infant summer hospital.

Lunch-room management course.—A one-year course, five days a week, prepares women to take charge of lunch rooms, cafeterias, or lunch rooms in public schools, department stores, factories, and Christian associations. Applicants must be 24 years of age and have had good household experience. The class is divided into three groups, and the groups rotate between classroom and laboratory work. The cafeteria of the institute affords a practice field, all its cooking and serving being undertaken by young women in the lunch-room course. Each student in turn acts as manager, as well as serving in subordinate positions. The course of study includes work in bookkeeping, house construction, physiology, foods, practical cooking, household management, planning, and cost of menus, and laboratory work.

Section 4. HOMEMAKERS' SCHOOL, STOUT INSTITUTE.

The Stout Institute, of Menomonie, Wis., which opened the training school for teachers of domestic science and art in 1903, established a homemakers' school in 1907, maintained for the purpose of preparing young women, who do not wish to teach, for the responsibilities of the homemaker.

President Harvey,[1] of the institute, in speaking of the course of study, states that it was planned as follows:

> The most important activities demanded of a woman because of her position as a homemaker were enumerated and classified, so far as their interrelation made such classification possible. An attempt was then made to answer the question, What does a woman need to know and to do for the proper performance of each of these activities? The answer to this question in each field of activity indicated the scope and character of the course of study for that field. This plan makes it possible to concentrate upon the essential things and to eliminate the nonessentials. It is probable that, if time permitted, the course of study in each particular field might be considerably elaborated with an addi-

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[1] "A School for Homemakers," L. D. Harvey. Report of the U. S. Commissioner of Education, 1911, pp. 313–329.

tion of cultural value, although it is believed that there is high cultural value in every detail of the work regarded as necessary. In the main, effort has been concentrated on the essentials. The course in home and social economics is perhaps the only one in which there has been a development of work beyond the essentials into the field of what would be desirable because of its effect in broadening interests and giving a wider outlook on woman's relation to the home and society and a larger appreciation of her opportunities and responsibilities.

The subjects treated in the curriculum are as follows:

The house, with instruction in house sanitation, house decorating and furnishing, house management, business management in the home; food science, with training in food study and preparation, chemistry, biology, physiology, dietics, selection of food materials, care of food materials, preparation of food, and serving; clothing and household fabrics, including house decoration and furnishings; the care of children; home nursing and emergencies; home and social economics, which treats of woman's ethical, social, and industrial relations with the other members of the family and with the members of society outside her home.

Section 5. GIRLS' TECHNICAL INSTITUTE, MONTEVALLO, ALA.

This is a State institution for girls, the purpose of which is (1) to teach the principles of the liberal arts and sciences and their application to homemaking; (2) to enable young women who are its graduates to do effective work as teachers; (3) to train young women to be self-supporting through proficiency in the industrial or fine arts; (4) to inculcate in the young women of Alabama ideals of character and culture, so that they may carry forth into the State the blessings of strength, ability, and refinement.

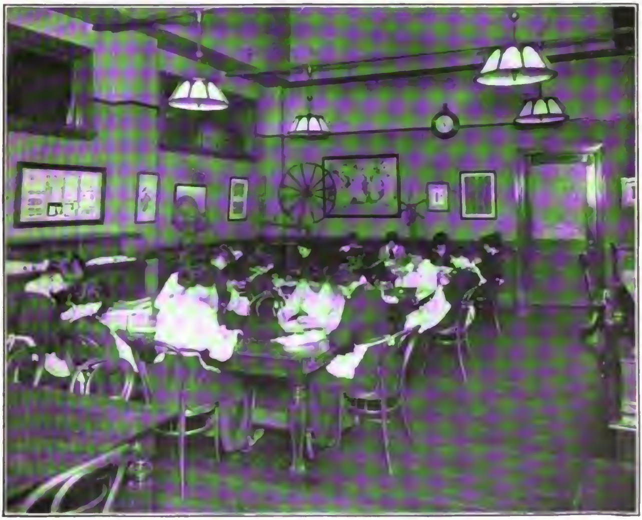
The institute is open to white girls who are 15 years of age or older, and who have finished the seven grades of the public schools. It gives the equivalent of a high-school course and one or two years of college work. In home economics there are two departments—domestic science, which teaches the principles underlying housework, offering three majors and three minors in the regular course, and domestic art, which offers interrelated courses in sewing, art, textiles, home management, house planning and furnishing.

Other departments offer commercial work, fine arts, manual training, music, and education.

Section 6. BRADLEY INSTITUTE.

Bradley Polytechnic Institute, Peoria, Ill., receives graduates of the common school for a six-year course, which provides the equivalent of high-school training and two years beyond. There is specialized technical work in several branches, and college work is offered corresponding to the first two years in a college, university, or engineering school. In the teaching of domestic economy the institute offers a two-year course leading to the diploma and a four-year course

A. TRADE DRESSMAKING LABORATORY, PRATT INSTITUTE, BROOKLYN, N. Y.



B. SEWING LABORATORY, DREXEL INSTITUTE, PHILADELPHIA, PA.

leading to the degree of bachelor of science; 15 points of academic work are required for admission.

Section 7. SOUTHWESTERN LOUISIANA INDUSTRIAL INSTITUTE.

The Southwestern Louisiana Industrial Institute, at Lafayette, La., founded in 1898 by the State of Louisiana, was opened in 1901 to offer (*a*) practical courses one or two years in length in various vocational fields, (*b*) a four-year academic-industrial course, and (*c*) normal courses two years in length in home economics and in agriculture. The institute also conducts a summer school. Graduates of grammar schools are admitted to the institute, and graduates of the State high schools are admitted into the fourth year of its courses. The institute offers, in domestic science, courses in food preparation, home nursing, laundering, dietetics, advanced cooking, and food chemistry; and in domestic art, courses in elementary clothing, sewing, textiles, millinery, and the theory and practice of teaching domestic art in schools. Practice teaching in domestic science is also offered in the normal course in home economics.

Section 8. TUSKEGEE INSTITUTE (COLORED).

Tuskegee Normal and Industrial Institute, located at Tuskegee, Ala., was founded in 1881, and provides a combined academic and industrial training for young colored men and women. The idea and the inspiration of Tuskegee was derived from Hampton Institute, Virginia, founded in 1868. The general program at Tuskegee provides three days of academic work a week and three days of industrial work. The academic course embraces seven years' work—three years of preparatory instruction and four years of normal work. The closest possible relation is maintained between the academic and industrial departments.

The department of women's industries furnishes instruction in the following: Plain sewing, two years; dressmaking (requires plain sewing as prerequisite), three years; ladies' tailoring (for postgraduates and those who have completed dressmaking), one year; millinery (hand sewing required for admission), two four-month terms; cooking, four years; laundry (with soap making), one year; child nursing and nurture, including the care of the infant, small children, and larger children. Outside industries for girls, including vegetable gardening, ornamental gardening, and fruit raising, are also given as a two years' course. Mattress making, broom making, and basketry are also taught.

The girls' industrial building, Dorothy Hall, 120 by 144 feet, contains the various classrooms and workrooms, including rooms devoted to the laundry, for washing, drying, ironing, etc.; rooms used for dressmaking, ladies' tailoring, plain sewing, and millinery departments; rooms for cooking and dining-room service; other rooms for nursing and child care; and a suite of kitchen, dining room, bedroom, and sitting room for instruction in home keeping. A five-room practice cottage is provided in which the senior girls keep house in groups of five, "living in the cottage and having entire charge of themselves and the house, doing all the work pertaining to housekeeping from Monday's washing to the Saturday's preparation for Sunday."

The provision made for cooking indicates the general method in the industrial division. In this department there are two kitchens, three dining rooms, a sitting room, a bedroom, and a bathroom, which are used for practice work. Special stress is laid upon cooking plain food. Cooking is obligatory for all girls; in a single year 500 girls receive instruction. A limited number of young women desiring to be cooking teachers, professional caterers, and workers in related fields receive special training.

The department of school extension of the institute has been an influence for home betterment as well as industrial betterment through its annual conferences, local conferences, farmers' institutes, mothers' meetings, settlement work, and extension work in the county rural schools, 55 of which are now under the general supervision of Tuskegee Institute. The institute also maintains a department of research and an experiment station, certain publications of which bear directly on home betterment (see Bibliography in Part IV of this report, Bulletin, 1914, No. 39).

Voorhees Industrial School (colored), Denmark, S. C.—The Voorhees Industrial School, for young colored men and women, was opened by a graduate of Tuskegee in 1897. The industries in which young women are instructed include: Plain sewing, two years' course; dressmaking, three years' course; laundering, mattress making, broom making, cooking, three years' course; canning, nurse training, three years' course. Academic instruction accompanies the industrial training.

Section 9. COOKING SCHOOLS—NEW YORK COOKING SCHOOL.

"Cooking schools" were established in various eastern cities beginning in the seventies (Part I of this report, Bulletin, 1914, No. 36, p. 15); such schools had been organized in Europe at least a generation before. The New York Cooking School, which has a long and useful history, is typical of these schools: as its name implies, it teaches practical cookery. Its aim is "the betterment of the food in all homes, especially in those of toilers and all dependent upon their own earnings for daily bread." The school offers ladies' morning classes once a week for 12 weeks; Saturday morning classes for boarding-school pupils; evening classes for teachers, business women.

and girls; afternoon mission classes (philanthropic classes with the expense borne by the patrons of the school—gifts of $42 to $60 providing a class); classes for nurses and attendants in hospitals; normal sewing classes, with a certificate for teachers; and private lessons. Three grades of work are given—simple, plain, and general; and printed outlines are furnished, which are available for use elsewhere.

Section 10. THE SCHOOL OF MOTHERCRAFT, NEW YORK.

The School of Mothercraft, New York City, opened in 1911, is intended to provide information and practical instruction in the home care and training of children, in eugenics, and in problems of the family.

The work is designed to meet the needs of young women, mothers, mothers' assistants, social workers, nurses, kindergartners—women who desire special training to understand the child and to meet, sympathetically and intelligently, the responsibilities of childhood.

The special subjects of study include the following:

The family, biology, eugenics, physical care of infants, child hygiene, dietetics, children's cooking, laundry and sewing, marketing, housewifery, management, home care of sick children, emergencies, hygiene for mothers, child psychology and mental hygiene, principles of child training and of the kindergarten, children's stories, games, songs, handwork, nature study.

A one-year curriculum is offered which includes study of the subjects listed and practical work in the nursery, household, and kindergarten. It is a vocational course for homemakers, mothers' assistants, social workers, teachers of mothercraft. A certificate is granted to students completing the course satisfactorily. Applicants for admission must be at least 18 years of age and have the equivalent of a secondary education. Students desiring to qualify as teachers must be at least 20 years of age and have a college or normal training. A limited number of students can be received in residence.

Special short courses are also arranged, adapted to the needs of different students, as on "The nursery," "Story telling," "The kindergarten in the home," and "Childhood and literature."

"The child garden" is maintained for children under 7, with morning sessions and a program of outdoor play, nature study, music, speech training, etc.; and a resident nursery is maintained where infants may have continuous care during emergencies.

The registration for 1912 was about 30 extension students; no students are reported as completing the full course, but two partially completed it; in 1913 four students entered for the full course and three others took part-time work, in addition to extension students.

The director of the school is Mary L. Read, and, besides three assistants devoting full or part time to the school, there were some dozen special lecturers in 1912–13. The school has attracted attention locally and nationally as an attempt to provide direct training in child care.

Section 11. PRIVATE SCHOOL WORK IN HOME ECONOMICS.

A number of private schools for girls have opened departments of home economics. The most striking experiment in this line is the Garland School of Homemaking, Boston, described below. The Barnard School of Household Arts, of New York City, is another interesting experiment in this field. Many other private schools are offering more or less extended instruction in the household arts and thus meeting the current demand. It is obvious that these private schools, as well as the public schools, must fit young women to meet the ordinary responsibilities of the home.

Some of the European schools have introduced not only household-arts instruction for young women, but also instruction in the arts of country life which especially concern women, such as the direction of the country estate and such special activities as dairying, poultry raising, kitchen gardening, horticulture, beekeeping, and the like. State colleges of agriculture and the secondary schools of agriculture are quite commonly combining such agricultural instruction with household arts for their young women students. It seems certain that the girls' private school of the future will provide instruction not only in homemaking, but in many instances, because of the rural responsibilities which come to women of wealth through the ownership of country estates, also training in landscape gardening, horticulture, and rural economy.

The Garland School of Homemaking.—The Garland School of Homemaking, of Boston, was established in 1902, as a course in homemaking in a kindergarten training school which should attempt to express an ideal of nonprofessional training in homemaking, which was taking form at that time. The homemaking course was an experiment in "arousing consciousness of this great educational need and in developing by experiment a curriculum to meet that need." It did not pretend to form popular courses in cooking and sewing, nor to train teachers and professional housekeepers, but simply aimed at equipping the young woman as a more efficient homemaker in her own home. In 1909 the kindergarten course was discontinued and the homemaking course became the sole work of the school. In 1913 the school, which was located at 19 Chestnut Street, opened a second house at 35 West Cedar Street, known as the Home House, which is utilized for practical instruction in housekeeping.

The Garland school offers a regular course to both resident and nonresident students with a curriculum requiring five mornings and one afternoon a week. A special abbreviated course is given three mornings a week, also a half-year course for graduates of the school requiring two mornings a week, and special study courses for housewives. The regular course includes instruction in the following subjects, all taught from the homemaking point of view: The family and the home, the house, household management, food and dietetics, clothing, eugenics, physics, chemistry, biology, economics, literature. The special course omits economics, literature, house building and furnishing, and millinery. The graduates' course includes child study, house furnishing, millinery, food buying, the planning of meals, and cooking. Field work is provided in the regular and special course by visits to markets, milk farms, factories, shops, schools, and the like. A striking feature of the school is the provision of practice work in housekeeping for resident students. The home house provides the resident girls with a home in which they try out their skill in various departments of household management. They go to market, plan meals, occasionally prepare the family dinner, direct the cleaning of rooms, and try time experiments in regard to various household duties. A competent adviser is always at hand to help when needed in making application of the principles studied in school to the home problems of buying and accounting, of meal planning, cooking, etc. All of the practice work is done solely from the standpoint of its educational, not of its industrial, value. Consequently the students do not carry the burden of the housework throughout the year, since this would often necessitate a sacrifice on the educational side. They are, however, the homemakers and the managing housekeepers; and their responsibilities, though varying, are genuine and must be fulfilled with faithfulness and intelligence.

Section 12. SCHOOLS OF PHILANTHROPY AND THE HOME.

One of the remarkable educational developments of the new century are the schools of organized philanthropy and professional charity work which have been established in New York, Boston, Chicago, and St. Louis. Their common purpose may be stated, as by the New York school, "to fit men and women for civic and social service either professional or volunteer." Such service inevitably concerns the home more than any other social institution; it is the home that often causes individual and social lapses; it is in the home that the effects of such lapses are most evident; and philanthropic effort must often be directed at home rehabilitation. So the New York School of Philanthropy has on its staff one specialist in "families" and another in "child welfare." "Family rehabilitation" is one of the central topics of instruction in such a school of philanthropy; and the facts and procedures which these schools are developing in repairing broken family life will be found to have a wealth of suggestion for teachers of normal home life in schools of home economics. The special one-month courses, or "institutes," given by the New York School of Philanthropy in June, 1914, included courses on "family rehabilitation" and on "housing."

Section 13. INDIAN SCHOOLS.

Instruction in the household arts is a part of the curriculum of the schools for Indians. Miss Spethman in 1911 reported that such instruction was given in 138 Indian schools.[1] The United States Office of Indian Affairs, Washington, has published certain outlines for such instruction which should be consulted by persons interested: "The outline lessons in housekeeping, including cooking, laundering, dairying, and nursing, for use of Indian schools," and "Some things that girls know how to do, and hence should learn how to do when in school."

Section 14. STATE INDUSTRIAL SCHOOLS FOR GIRLS.

Statements secured from 36 of the 50 State industrial schools for girls, or as they were formerly called, reform schools, show that the household arts have an important place in the general economy of these institutions. The most striking fact is that in three-fourths of these schools all of the housework is performed by the girls and young women who are members of the school; and in four others three-fourths of the work is so performed, while two schools report that only one-fourth of the housework is performed by the girls. This situation will be good or bad in the industrial school, of course, not in proportion to the amount of work done by the girls, but according as it is organized with an educational and social method and purpose.

An attempt was made to get at this problem of fundamental educational purpose in the schedule of questions sent to the schools, but probably not with complete success. Of the 36 industrial schools, 12 report that no formal lessons in housework or any of its branches are given: instruction is reported by the remaining 24 schools in different aspects of household arts as follows: Food materials, by 14 schools; cooking of foods, by 22 schools; service of foods, 20; care of rooms, 15; care of floors, 15; laundry, 17; plain sewing, 20; dressmaking, 15; millinery, 4; household accounts, 4; care of children, 5; costume, 1; art sewing, 7; care of sick, 1.

Another question asked was whether practice work in the household arts was required. Various forms of practical work were reported as required of the girls by the number of schools respectively indicated: Cooking, 32; table service, 34; care of rooms, 35; care of floors and woodwork, 34; laundry, 33; plain sewing, 32; dressmaking, 28; millinery, 7; fancy cooking, 1; preserving food, 1; child care, 1; embroidery, 2; model sewing, 1; art sewing, 4; power sewing-machine work, 1; basketry, 3; knitting, 1; rug or carpet making, 5.

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[1] Journal of Home Economics, Dec., 1911.

Another measure of the household-arts training of the industrial schools was sought in a statement of the vocations for which the training fitted the girls. Twenty-nine schools reported that the training equipped their students to earn their living as seamstresses, 28 as general houseworkers, 27 as waitresses, 19 as cooks, 19 as dressmakers, 6 as nurses, 5 as laundresses, and 3 as milliners. One school reports that it has provided training in a hospital in child care, so that several of its former students now earn $11 a week as children's nurses.

The general conclusion from the inquiry is that in practically every case the girls who are sent to these so-called reform schools or industrial schools are given an extended practical experience in housework under direction. In two-thirds of the schools some formal instruction in household arts is given, though this "formal training" is not to be interpreted too literally. There are indications of better standards, and what was originally doubtless largely a method of getting the housework of the institution done is coming to be regarded as educational subject matter with important possibilities. One school has recently instituted a graded series of three courses in sewing and dressmaking under a special supervisor. The general practice work in the same school provides one month's work in each of these departments: Cellar, girls' dishes, officers' dishes, wash room, ironing room, girls' cookroom, and officers' cookroom. Another school states the purpose of its training "to make a good homemaker" and knowledge of "some one art sufficiently well to be self-supporting." This school provides a commercial training for girls who are of high-school grade, but all girls take the household arts. The danger in the industrial school is a severe prescription of housework without instruction or inspiration. What is really called for is a curriculum in which the academic elements are given adequate recognition and in which the household arts are approached educationally. The organization of such schools on the cottage system, whereby small groups live in cottages and do the housekeeping much in the spirit of family life, is a related reform. The New York State Reformatory, at Bedford Hills, is typical of the progressive institutions of this latter type.

VII. THE AGENCIES AND ORGANIZATIONS CONCERNED WITH HOME BETTERMENT.

This division presents the various agencies, other than schools, that are working for popular education and betterment as regards the home; the activities of the Government, Federal and State, in this field; and the various organizations directly or indirectly concerned with home. These include certain agencies that have operated especially in the country, such as the farmers' institute for women, the grange, and rural household demonstrators, as well as other agencies which, originating in cities, are nearly all finding application in rural communities.

Among the chief topics in this section of the report are: The Young Women's Christian Association, settlement work, visiting housekeepers, housekeeping centers or model flats, visiting nurses, the day nurseries, home betterment in industrial communities, vacation training in household arts in summer camps and camp schools, training for the home by the Camp Fire Girls and Boy Scouts, correspondence schools of home economics, libraries and home betterment, journalism for the home, and exhibits and the home. Additional sections discuss the special activities of the Federal Government which concern home betterment—the Department of Agriculture, with its nutrition investigations and food-control work, and the Children's Bureau. The possibilities of scientific study of household problems are outlined in connection with the proposal to have the Government endow the study of household problems in the State agricultural experiment stations.

The last section deals with organizations which directly or indirectly are concerned with home betterment. These include the American Home Economics Association, the League for the Protection of the Family, the International Congress on Home Education and the International Congress for Teaching Domestic Economy, the Mothers' Congress and Parent-Teachers' Associations, National Housewives' League, Associated Clubs of Domestic Science, the International Congress of Farm Women, the Society for the Promotion of Industrial Education, the Society for the Study and Prevention of Infant Mortality, the committee of American Medical Association on public health education among women, National Housing Association, National Consumers' League, National Child

Labor Committee, Child Helping Department of the Russell Sage Foundation, the recreation movement, and other organizations. Special mention is made of the Federated Women's Clubs, an organization which is rendering a nation-wide service for home betterment.

This list, it is believed, includes the main organizations and agencies, outside of the work of the schools, which are participating in the home-education movement. In consulting this division, one should bear in mind the fact that in getting a complete view of any field—as, for example, that of the rural home—one must add to the agencies here described the work of the schools, the normal schools, technical schools, and the colleges and the extension work of the latter. Similarly, for any other aspect of home education.

Section 1. WOMEN'S WORK IN FARMERS' INSTITUTES.

The farmers' institute is a one, two, or three day forum or informal local school for farmers, usually organized through some State agency—the agricultural college, experiment station, or State department of agriculture. Women have often attended the institutes, and naturally enough programs for women, either for part time or entirely paralleling the sessions for men, have come to be organized. In 1912–13, the 12 States listed below held separate institutes for women. Institute meetings for women were held in many other States.

TABLE 20.—*Farmers' institutes for women.*

States.	Institutes.	Sessions.	Attendance.
Arizona	1	2	300
California	7	8	868
Florida	5	12	1,200
Idaho	5	5	320
Kansas	73	73	3,688
Michigan	54	54	....
Missouri	19	....	....
North Carolina	230	460	20,268
Oklahoma	497	1,125	30,922
South Dakota	128	128	11,826
Utah	36	72	3,165
Wisconsin	43	87	11,482
Total	1,098	2,026	84,039

In all, in 1912–13, 1,098 separate women's institutes were held, with a total attendance of 84,039, which is a striking advance over the year 1910–11, with 418 institutes with 30,814 in attendance. In addition to these separate institutes for women, separate meetings for women within the farmers' institutes are definitely reported from the following States: Colorado, Illinois, Indiana, Iowa, Montana, New York, Ohio, Oregon, Texas, and West Virginia. In 22 States at least, therefore, provision for women's meetings in farmers' institutes is made, 12 separately and 10 jointly.

In all, 7,926 farmers' institutes were held in 1913, with an aggregate attendance of 2,897,391; the women's separate institutes were therefore about 13 per cent of the total number, though the attendance comparison is less favorable. Related to the institute work are these other agencies: (1) The movable schools of agriculture and home economics, of which 187 were held in 1913 in 13 States, with an attendance of 85,637; (2) educational trains, of which 25 were run in 1913 in 15 different States, with an attendance of 501,523; (3) fairs, picnics, and conventions, 346 of which, with an attendance of 95,209, were addressed by institute lecturers; (4) institutes for young people from 14 to 18 years of age, which were held in 5 States, with an attendance of 22,100; and movable schools for young people, of which 14 were held, with an attendance of 1,344. These statistics are scarcely complete, since, for example, many institutes and movable schools are held under other auspices than the official institute movement; yet the outlines of this great popular effort to reach farm communities are very evident. In all these enterprises, instruction for the women and girls of the farm is included. Of the 187 movable schools, for example, 50 were for women, and these extended over 362 days, an average of about 7 days each, with an attendance of 11,502. The extension work of the State colleges and universities in their field is described elsewhere. (See Part III of this report, Bulletin, 1914, No. 38.)

The institute itself is generally regarded as a pioneer educational effort, which is to arouse an interest in better methods and in progress. The instructional train, the demonstration, and the movable school, on the other hand, are regarded as agencies for more intensive instruction; especially so the movable school, which provides a week's study of some specific subject, or, as in certain foreign countries, several months' study, then moves on to another community where the course of instruction is repeated. The school requires advance registration, regular attendance, and study; the institute is a mass meeting. The two serve different purposes; both will be needed in the effort to reach the women of the country for better housekeeping, the one to arouse interest, the other to give instruction more definite in character.

Facts as to a few States may be given. The women's institutes of Michigan were begun in 1895, under Mrs. Mary A. Mayo's direction.[1] Her lecture topics will illustrate the scope of early work: Mother and daughter; Making farm work easier; The well-bred child; Home life on the farm; Poultry raising for the farmer's wife;

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[1] See "One Woman's Work for Farm Women," Buell, Whitcomb & Barrows, Boston.

How to keep the boys on the farm; Mother and the school; The house we live in; The unappreciated side of farm life; The mothers greatest need; Wifehood and motherhood; and Mother and children. The emphasis on the personal and ethical is obvious. Recent programs in institutes have put more emphasis on the technical side of housework and management—food, clothing, and shelter. There is a gain in this in imparting skill in the household arts and popularizing scientific facts as first aids to the housewife. There are evidences, too, of a new emphasis on the ethical, or, as we are likely to say to-day, the social, civic, and personal in home and community relations.

In Illinois there is a very effective "Department of household science" in the farmers' institutes, which has its own officers (Mrs. H. M. Dunlap, Savoy, Ill., president), conducts the institutes' sessions for women, and publishes a yearbook; the University of Illinois cooperates by supplying speakers for from 50 to 80 meetings. The "Yearbook" includes, besides reports, valuable articles, such as the following in 1912: Educating girls for the home; Household economics; Household appliances and conveniences; A balanced ration; The social efficiency of the home; How school work can be more closely related to home needs; and Training the girl to help in the home. A number of menu suggestions are presented, and a study of food values, published by the Illinois State Food Commission, is reprinted.

Related to the Illinois institutes is the Illinois Girls' State Fair School of Domestic Science, established in 1898, which is held as a temporary two weeks' school in the women's building at the State fair grounds, Springfield, erected and equipped at a cost of about $30,000 in 1903. Each county sends one representative, or more if there are vacancies; a fee of $10 is charged for board; the students live in the women's building and are divided into groups for its service—meals, dish wiping, dining-room work, baking. Mrs. S. T. Rorer was the first principal of the school, and Mrs. Nellie Kedzie Jones is the present principal. The building accommodates 102 students, and 101 students were in attendance in 1913. The program provides a lecture daily by a nurse and two food lessons with demonstrations by the principal. The three best students are given scholarships at the State university, and each student is expected to report at her county farmers' institute.

In Oklahoma separate women's institutes are organized under State direction. A course of study covering nine months is provided, and monthly meetings are expected; local leaders are developed; half a hundred circulating libraries of home economics are sent about.

In Florida institutes for women began in 1912–13. They are arranged in various localities by the superintendent of institutes at the State agricultural experiment station; joint sessions for men and women are held mornings; separate meetings for each in the afternoons. There are speakers on agriculture from the State university and on home subjects from the State College for Women; exhibits, demonstrations, and stereoptican lectures are provided. The women's topics at a recent two-day institute at Greensboro were as follows:

Is a woman's time worth anything? The girl on the farm; Demonstration—Meat in the diet, and its preparation; Preparation of foods for infants and children; The home as a nation builder; Labor-saving conveniences; Demonstrations—Yeast bread, Quick bread; Home nursing; Simple desserts. The institute work is followed up by forming local home improvement clubs, which carry out study programs and report monthly to the college.

Facts regarding farmers' institutes are to be found in the annual report of the American Association of Farmers' Institute Workers, and the annual report on farmers' institutes and agricultural extension work, and other special publications issued by the Office of Experiment Stations, United States Department of Agriculture, which includes on its staff a "farmers' institute specialist" who acts as a clearing house for the institute movement. The association referred to has a standing committee on women's institutes. A canvass of women's institute workers made by this committee in 1911 showed (1) a sentiment favoring joint institutes, with separate sessions for women, but some joint home-making sessions for men and women rather than separate institutes for women; (2) an opinion that farm women are ready for more advanced instruction in dietetics; (3) that more capable instruction in institutes waits on the training of special workers (Cornell University has since established a course for training extension workers in home economics); and (4) varying opinions as to whether farm homes could be visited by teaching experts as farms are visited by agricultural experts.

Those interested in women's institute work in the United States will find the experience of the Province of Ontario illuminating. The women's institutes of Ontario embrace 750 organizations, numbering 25,000 members, with the following purpose:

> The dissemination of knowledge relating to domestic science, including household architecture, with special attention to home sanitation; a better understanding of the economic and hygienic value of foods, clothing, and fuel, and a more scientific care and training of children with a view to raising the general standard of the health and morals of our people; or the carrying on of any work which has for its object the uplift of the home or the betterment of conditions surrounding community life.

The Ontario institutes for women began about 15 years ago and developed rapidly. At first domestic science absorbed the attention of the members. Recently the programs have widened. The form of organization requires local initiative. Each organization is to hold at least four meetings a year, and many hold monthly meetings. Once or twice during the year a lecturer from the provincial department of agriculture visits each local organization. In addition the department grants $3 each year to each branch institute and a direct grant to the district organization of $10 and $3 in addition for each branch, a total in 1912 of $4,971. Recently systematic instruction by well-qualified teachers in cooking, sewing, and home nursing has been introduced wherever the individual institute forms a class of 25 persons, each person paying $1 for the course. An annual convention of the institutes brings together 500 or more delegates from all sections of the Province. The institute idea has spread in British Columbia and Alberta, and a few organizations have been formed in other Provinces. An inter-provincial organization has been formed to advance the institutes.[1]

Section 2. THE GRANGE AND HOME ECONOMICS.

The Patrons of Husbandry, populary known as "the Grange," a farmers' organization extending into some 30 States, with a membership of over a million, has from its beginning in 1867 given women an equal place with men in its membership, and has recently undertaken work in home economics of a distinctive character.

Certain statements in the declaration of purpose of the Grange adopted in 1874 show its early and fundamental interest in what we called to-day the home-economics idea:

> To develop a better and higher manhood and womanhood; to enhance the comforts and attractions of home, and strengthen our attachments to our pursuits. * * * We especially advocate for our agricultural and industrial colleges that practical agriculture, domestic science, and all the arts which adorn the home be taught in their courses of study * * *. Last but not least, we proclaim it among our purposes to inculcate a proper appreciation of the abilities and sphere of woman, as is indicated by admitting her to membership and position in our order.

The unit of organization is the local grange, meeting weekly or once or twice a month, with programs looking to the advancement of country life; the local granges unite for quarterly meetings in county or Pomona granges; they also send the masters and their wives (or if the grange master is a woman, her husband is associated with her) as delegates to the State grange; and the masters of the State granges and their wives form the National Grange. The grange is unique in the equality given women in its membership, staff of officers, and business.

The "master" of the local grange is the presiding officer and is charged with business and financial duties; the "lecturer," who is often a woman, is responsible for the social and educational programs of the organization.

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[1] See Annual Reports of the Women's Institutes of Ontario, Department of Agriculture, Toronto; also Journal of Home Economics, 5 (1913), p. 197.

Some direct efforts for home betterment have from the first been made in connection with the regular programs of grange meetings which have included topics related to the home. Two women may be mentioned especially in this connection, first, Mrs. Mary A. Mayo,[1] who, as a prominent worker in the Michigan grange from the seventies until her death in 1903, secured a hearing for the problems of the home, of child care, of household management and related matters, and especially it would seem of the personal and social problems of the home. In 1895 Mrs. Mayo became a leader in the women's division of the farmers' institutes of Michigan and carried further her remarkable work for Michigan farm women.

The second woman who is especially responsible for home economics progress in and through the grange is Mrs. Elizabeth H. Patterson, of College Park, Md., elected Ceres in the National Grange in 1907 and now chairman of its national home-economics committee. Mrs. Patterson turned the Grange's interest in home problems to a study of the practical and technical aspects of housekeeping. As Ceres, she conducted a home-economics department in the National Grange Monthly with articles and lessons, which were afterwards reprinted and circulated among the local granges, on such subjects as the house—its structure, decoration, care and sanitation; principles of cooking and dietetics.

In 1908 Mrs. Patterson reported to the National Grange that—

> As far as I have observed, questions related to the home do not enter into grange programs in proportion to their importance. In many instances the women's part is chiefly devoted to art, music, literature, or often something in the comic or frivolous vein. This is not as it should be. Why are we home makers satisfied with the husks?

In 1909 she reported increased interest and quoted one State lecturer's statement that—

> the home in general has been talked about in the grange perhaps quite as much as the farm in general—possibly more—but that the specific duties of the house and its work have by no means been taken up in the same technical way that the technical work of the farm has.

It was this technical study of home problems which Mrs. Patterson emphasized. A standing committee on home economics was appointed in the National Grange, and similar action recommended to local granges.

In 1911 reading courses and study circles in home economics were reported by some granges, with the comment by Ceres, "This is a good plan, provided it does not take the place of having discussions of home subjects at regular grange meetings." State granges were urged to furnish speakers on home subjects to local granges, to cooperate with the home-economics work of State colleges, and the importance of legislation introducing home economics into rural schools was urged. The National Grange committee on home economics reported in 1912 that 18 of 29 State granges replied as to home-economics work; 3 reported as much attention to home economics as to other subjects; 12 reported active support of the Federal bill for aid to vocational education, including home economics; 8 States had State home-economics committees, and 2 others were about to be appointed; 10 States report cooperation between the State college and the State grange in home-economics work; the committee also reported on the status of home-economics work in State colleges, in the agricultural fairs, and other divisions of the field; and, finally, it presented a program of progressive work for State granges and the National Grange, including a recommendation that the latter prepare a leaflet of reference books on home economics and draw up a year's outline of study of home economics to be followed by local granges. In 1913 the national committee continued this program, and urged use of score cards for exhibits of home products at fairs.

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[1] One Woman's Work for Farm Women. Jennie Buel. Whitcomb & Barrows, Boston. See also above, p. 154.

It is evident that the effort to get attention for technical problems of the home within the grange has succeeded, illustrating the possibility of securing in a nontechnical organization an intelligent consideration of underlying principles and of technical problems on which improvement in home matters will turn.[1]

Section 3. RURAL HOUSEHOLD DEMONSTRATORS.

The appointment of county agents and demonstrators to aid in advancing agriculture, which is well under way as an item in the country betterment movement, is taking such a form that it will include rural home betterment in its program. Several States, as New York, Vermont, Michigan, Massachusetts, Indiana, have already taken action in authorizing county or district agricultural advisers; and county industrial supervisors are also at work in certain Southern States, as Virginia, South Carolina, Georgia, Alabama, Mississippi, and Louisiana. Thus the Virginia State superintendent of public instruction reports supervisors of industrial work for white schools in 3 counties and for negro schools in 28 counties, with 23 of the latter working throughout the year.

> They visit the homes of the negroes and instruct them in gardening, sewing, cooking, and other industrial arts. Our next step will be to organize a like system of supervision among the whites.

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[1] The Grange and Home Economics. Elizabeth H. Patterson. Journal of Home Economics, 5 (1913), p. 206.

In North Dakota Miss Mildred Veitch was appointed field woman of the Better Farming Section of the Agricultural Experiment Station in 1913, with the plan of giving attention to home betterment by aiding individual homes in the organization of the kitchen and the installation of modern equipment. Her field is the State, and her work has begun with great promise.

The Indiana law of 1913, in providing for county agents, states that they shall—

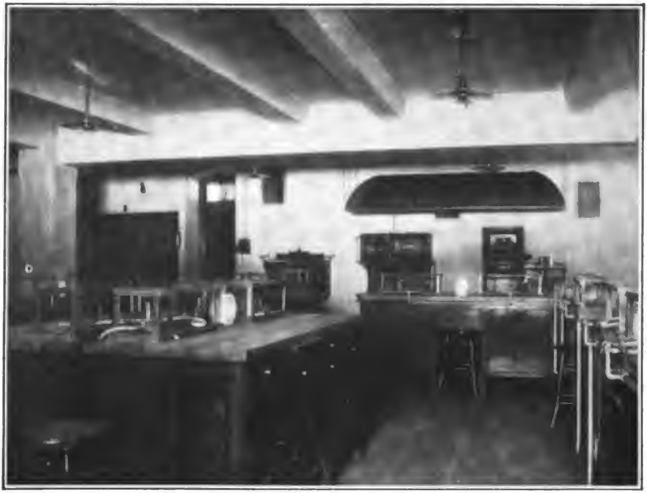
> under the supervision of Purdue University, cooperate with farmers' institutes, farmers' clubs, and other organizations, conduct practical farm demonstrations, boys' and girls' clubs, and contest work and other movements for the advancement of agriculture and country life, and give advice to farmers on practical farm problems and aid the county superintendent of schools and the teachers in giving practical education in agriculture and domestic science.

Thus, the Indiana plan for aiding the home through the county agent is restricted to school and club work in domestic science, but it is a hopeful beginning.

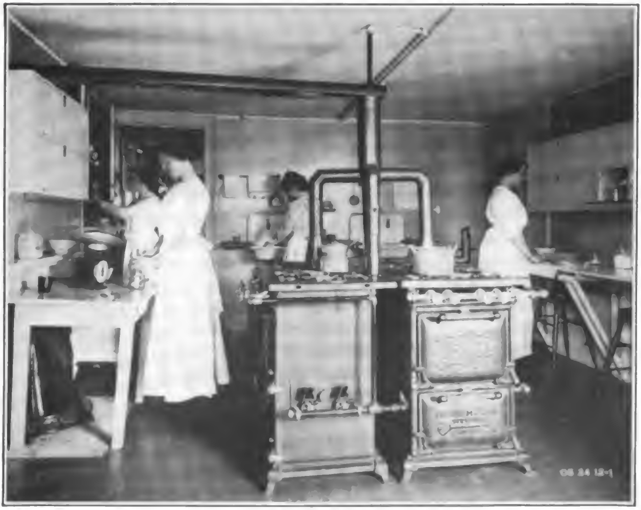
The Massachusetts Agricultural College has been consulted as to a county home economics worker, in cooperation with the Hampden County Improvement League, which supports the county agricultural demonstration work in the County of Hampden, Mass. Funds for the agricultural work were provided by the subscriptions of business men, and the addition of home economics work seems probable. The plan will be to appoint a worker who will have as headquarters "a small house centrally located * * * simply and artistically furnished to show what can be done with limited means, and immaculately kept." She will depend more, however, upon going about among the people, reaching them through the schools, the granges, farmers' institutes, the tomato and other clubs, and especially—

> going into the individual homes of the county and becoming thoroughly acquainted with the women and girls of those homes who, it is expected, will welcome her in the same manner that the men welcome the county agents. * * * The woman worker needs to be possessed of much tact, having the most kindly feeling toward the inefficient home maker; one who can lead without offending; and one whose ideals are very high, so that no matter what conditions may be found in the neighborhood, she will not become discouraged.

Prof. Laura Comstock, of the Massachusetts College, has outlined the possible services of such a county home economic worker to include: The presentation to women and girls of the subject matter of home economics, including food, the house, home management, modern appliances, house sanitation, and first aid; educational work with boys' and girls' clubs, and efforts to secure the introduction of regular teaching into rural schools; meetings with women's



A. COOKING LABORATORY, STATE NORMAL COLLEGE, ALBANY, N. Y.



B. AT WORK IN THE THE SCHOOL KITCHEN, THE GARLAND SCHOOL OF HOME MAKING, BOSTON, MASS.

clubs and similar organizations; the supervision of volunteer workers for home betterment.

The possibility of visiting instruction in rural homes has been under consideration at Cornell University for some time, and the directors of the department of home economics did some experimental work two years ago.

While "county household demonstrators" are not yet actually at work in the campaign for rural betterment, they probably soon will be. The method of such work, it should be noted, has already developed in the case of the visiting housekeeper or domestic teacher, who has been operating for several years in various cities under social-betterment societies. To cite another parallel, the visiting nurse who makes calls on order for a small fee is already in many communities helping the family to meet the emergencies of sickness. Such a service may gradually be extended as regards all housekeeping problems, and a type of household consultant be provided who will aid the individual housekeeper in her individual problem. One principle discovered in agricultural demonstration is that the place for a demonstration is the farmer's own farm, not on some county demonstration farm. This principle, applied to the household, means that the county household expert must get into the individual home and show how to do better with what is there and then how in time to secure better. The "getting in" looks like the nub of the problem, but experience will point a way. Perhaps Ambassador Walter H. Page's phrase about the tomato club work in the South, that "the tomato was the key that unlocked the kitchen door to the trained worker," points a method of wide application.

Section 4. YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

The Young Women's Christian Association maintains educational work in the local associations, supplementary to its central religious work, and this educational work commonly includes classes related to the home. In 1913, 151 associations reported an enrollment of 18,862 students in domestic-arts courses, and 117 associations an enrollment of 9,343 students in domestic science, a total of 28,205 students. In 1913, 80 domestic-science directors and 91 domestic-art directors were employed, giving full time to teaching. The registration figures quoted do not include work done with club girls who have some instruction in home economics, nor does it include the kitchen garden work, which is sometimes done with the junior girls. The range of courses offered in associations, according to a statement furnished by the education secretary, is about as follows, though not all of this would necessarily be given, especially in the smaller cities where a teacher would be employed by the hour or where volunteer service might be used:

First. Domestic-science courses for those young women who are expecting to be married or for women in their homes.

Second. Cooking courses for business women similar to the above, but with less expensive materials. This is the type of course most often given and is patronized by wage earners and women of moderate circumstances in their homes.

Third. There are occasionally courses for maids, for which mistresses may pay the necessary fee.

Fourth. The courses for industrial girls. Sometimes these are supper classes for which the girls make partial preparation of the simple supper, or they may be menu classes in which the girls are instructed to prepare breakfasts, lunches, and dinners at a minimum cost per person.

In addition to the above domestic-science teachers sometimes give courses away from the building, such as demonstrations in factories, providing the girls with copies of the recipes used; courses with homemakers in their own kitchens or courses in the kitchen of a church, or some institution, adapted to the needs of any group of girls who can be collected.

The courses in domestic arts include courses in trade dressmaking, in a few instances in home dressmaking, in the making of undergarments, in making over and repairing and elementary work for members; millinery classes, which are among the most popular of all; basketry; crocheting; embroidering; and almost any sort of work which may interest a particular group.

The household-arts commission, composed of domestic science and art directors, in 1913 drew up certain standard courses for the associations, which will doubtless assist in improving the work given. Two courses in cookery, each providing 15 lessons of two or two and one-half hours, are recommended for classes of actual and prospective homemakers and for business women; and two courses in sewing, each of 15 two-hour lessons, which include the making of underwear and a shirt waist.

Certain associations, notably Boston and St. Louis, undertake more ambitious educational work in this field. The women's training school of the St. Louis Young Women's Christian Association has two household-arts departments, domestic science and domestic art. The former (1) offers a two-year normal curriculum in preparation for teaching domestic science, with some work in domestic art, which requires in addition to household-arts subjects, educational courses, including practice teaching; (2) opportunity for registration in individual courses is given for "all classes of women, homemakers and business girls, mistresses and maids, for prospective teachers, and even children." The following domestic-science subjects are offered: Theory of domestic science (four courses); cookery, plain and advanced (four courses); homemakers' course; supper courses ("preparing, serving, and eating simple meals; each pupil in turn acting as hostess, as waitress, and as guest; efficient preparation of meals, with a jolly good time"); luncheon course; dietetics and serving; invalid cookery; maids' and cooks' course; infants diets' course; household management and accounts; cooking demonstrations; laundry course; junior course (for girls 8 to 14 years); and cafeteria work (the association maintains three lunchrooms). The domestic-art department offers instruction in sewing, dressmaking, and millinery for home use, and separate courses in preparation for trade.

The school of domestic science of the Boston Young Women's Christian Association, established in 1888, aims to equip teachers of domestic science and domestic art, workers and teachers in settlements, Christian associations, charitable organizations, and institutions of various kinds. A striking feature of the school is that all students are in residence and are responsible for the household management, cooking, sanitation, and other essentials of the school home. In this respect the school sets an example of much significance in household-arts training.

One of the new developments of the Young Women's Christian Association is to push its organization into the rural district. This means a movement in part for the benefit of the rural home.

Section 5. HOUSEHOLD-ARTS INSTRUCTION IN SETTLEMENTS.

A settlement, as an institution which works for neighborhood betterment, must make home betterment one of its main points of attack. Accordingly, we find that settlements quite commonly include in their activities all manner of household-arts teaching. The "Handbook of settlements," published in 1911, prints detailed reports of 413 settlements, in various parts of the United States, urban and rural, under private and public auspices, secular and religious in their foundation. An analysis of the reports there made shows that 225 settlements, or somewhat over half, offer some form of teaching in household arts. Sewing classes are reported by 202 settlements and sewing schools by 40 schools, while cooking instruction is given by 162 settlements, domestic science by 29, and a public school cooking class by one. The numbers of settlements providing other classes are as follows: Homemaking classes, 51 settlements; home sanitation, 3; mothers' meetings, 52; kitchen garden, 38; home nursing, 14; child care, 3; domestic art, 5; dressmaking, 63; millinery, 53; needlework, 78; knitting, 9; textiles, 1; laundry, 6. Such a list can be criticized on the face of it, possibly, as unduly stressing the individual arts of housekeeping, and as not emphasizing the unified work of household management or homemaking. One notes, too, the predominance of the sewing arts, which are reported in 445 cases, as compared with 192 of cooking and food preparation, and 129 of homemaking, household management, nursing, and mothers' meetings (or 167 for this group if the 38 kitchen garden classes are counted). Of 804 household arts classes and clubs reported in settlements, 55 per cent are in sewing and the needle arts, 24 per cent in foods, and 20 per cent in other household matters.

Settlements are just now concerned with improving the character of their instruction related to the home. An extensive survey of settlement activities as related to the problem of helping young women just entering industry to find themselves in industrial, social, and home relationships has just been made by the settlements and published under the title, "Young Working Girls."[1] It shows that there is often an ominous break in helpful relations between this young working girl of 14, 16, or 18 and her parents; the home of her parents does not furnish the steadying influence and the intimate knowledge of industry, amusements, and friendships which such a young woman needs; finally she comes into the experiences of her own home unprepared for them. The constructive suggestions give a large place to training for home life in the necessary "education in the realities."

> It is believed that the attractive power in domestic matters can best be increased by changing the emphasis from cooking to homemaking. * * * Mastery over its technique should be shown as an asset toward a really successful match, and a sane view of marriage presented. Model apartments and cottages should be furnished in connection with every settlement, and ought to be developed as a part of the public system of education as quickly as possible. Instruction should be given in the sources, constituents, values, and qualities of food; in the sanitary care of the household; in the upbringing of children; in the various arts and crafts connected with furnishing. The model apartments should also be made the center of a scheme of hospitality, so that the work itself may become associated with interesting and stimulating social relations.[2]

Definite action is being taken to improve the teaching of household arts in connection with settlements. Teachers College, Pratt Institute, and Lewis Institute, Chicago, each provide opportunities for practice teaching in settlements. Particularly significant is the provision at Simmons College, Boston, of opportunities for student teaching in settlements arranged at the request of the settlements of Boston in the effort to improve the quality of their instruction in household arts. Thirteen settlements cooperate, and 25 seniors and 15 special students have this year secured field experience under a supervisor who resides in one of the settlements. A graded system of lessons extending through three years is provided. The children are mostly under 14 years of age, but it is hoped to carry them on through "the baffling years from 14 to 18." Attempts are made to follow the instruction into the homes, and special problems such as Italian and Jewish dietaries have been attacked.[1]

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[1] Young Working Girls. A summary of evidence from 2,000 social workers, edited for the National Federation of Settlements by Robert A. Woods and Albert J. Kennedy. Boston. Houghton-Mifflin. 1913.

[2] Op. cit., pp. 155, 162, 164.

Section 6. VISITING HOUSEKEEPERS OR DOMESTIC EDUCATORS.

There was introduced a few years ago, by the Society for Improving the Condition of the Poor in New York,[2] a type of home teaching in needy families which consists of sending to the home a trained dietitian to give instruction on food values and practical cookery when failure in household management seems to be the source of the difficulty. The plan has now been adopted in many communities and undertaken by different organizations. The Young Women's Christian Association, of Cleveland, Ohio; the Associated Charities, of Detroit; the North American Civic League for Emigrants, Buffalo; and certain philanthropic societies in Chicago, and in Cambridge, Roxbury, and Boston, Mass., have undertaken similar work. From the original teaching of practical food management, the work has broadened out until it covers the whole field of household management, including child care, sanitation, making of clothing, household expenditures and accounts; in fact, remedial instruction in every field of the household. The advantages of such work are obvious. It reaches the present generation without waiting for the children to get instruction in the schools. It reaches the needy families. It is eminently practical. Measured by results in terms of cost, it seems to be more than justifying itself. There are valuable reports of this work in the Journal of Home Economics, December, 1913, and February, 1914. The work of the rural household demonstrator is a similar undertaking.

Section 7. HOUSEKEEPING CENTERS FOR THE TEACHING OF HOUSEHOLD ARTS.

The Association of Practical Housekeeping Centers, of New York, was organized by Miss Mabel Hyde Kittredge for the maintainance of model flats where children, young women, and mothers might secure training in homemaking. The flats are furnished with model equipment within a limited range of cost. A worker is sometimes in residence, and classes are organized for children in the afternoons and for older girls in the evenings. Miss Kittredge's "Housekeeping Notes" explains the method of instruction.[1]

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[1] College extension in domestic science, Robert Woods. Journal of Home Economics, 6, 41. See also Hyams, Isabel F. The Louisa M. Alcott Club. In Lake Placid conference on home economics. Proceedings, 1900, pp. 18–23. The teaching of home economics in social settlements. In Lake Placid conference on home economics. Proceedings, 1905, pp. 54–62.

[2] The economic value of the visiting dietitian. Winifred Stuart Gibbs. Journal of Home Economics, 1 (1909), p. 71.

The housekeeping flat has been introduced in various cities as a method of teaching the household arts in connection with settlements, public schools, or continuation schools, and other educational enterprises. It is noteworthy that the idea of using a house or apartment fully furnished as the teaching equipment for household-arts instruction is apparently receiving widespread adoption throughout the whole country. Not only public schools, but also normal schools, colleges, and technical schools are providing practice houses or apartments; and rural schools and industrial companies are establishing home centers. In this, American schools are following the precedent set by English teaching of household arts.

One critic of the neighborhood flats as a method of home betterment has said that the model flat will never fulfill its mission until a model family is found to keep it, so that it may become a model home as well as a model house. The flats have ordinarily been occupied during the daytime by the teacher, although in some instances the teacher has been resident in the flat and in this way has made it a home.

The housekeeping-center idea is entirely applicable to rural districts. The rural-school teacher who makes her home a center of informal teaching and an opportunity for bringing better equipment and methods to the attention of others; the model cottage as a domestic science laboratory at the consolidated school; and the demonstration farm, which must have a demonstration farmhouse and housekeeper upon it, as well as a farmer expert, are some forms which the housekeeping center is bound to take in the rural districts.

Section 8. NURSES AND HOME BETTERMENT.

The work of the nurse was originally a household art, and it is altogether appropriate that this modern specialized profession of nursing should make its contribution to better homemaking. The visiting nurse, school nurse, rural nurse, and other types of visiting nurse teacher go directly into the private home and have an opportunity to render aid there which is only rivaled by the work of the visiting housekeeper, whose field embraces that of the whole household. The nurse indeed often has a special advantage, since her care of the sick opens the way most naturally for informal instruction on all matters concerning the home. The new plan whereby the services of the visiting nurse are being introduced into communities on a self-supporting basis on the plan of charging a small fee to the individual family has much promise of widening the field occupied, and it is not too much to hope that in the future the visiting nurse as helper and teacher will come to be a common assistant during illness in the humblest home in every community. The cooperation of the visiting nurse is well illustrated by the Visiting Nurses' Association, of Boston, which supplements the specialized service of the nurse by visits of the general housekeeping teacher in cases where the fundamental difficulty is ignorance and inefficiency in the household arts.

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[1] "Housekeeping Notes," by Mabel H. Kittredge. Whitcomb & Barrows, Boston.

The nurse as a teacher of home nursing and in household problems of illness and child care is also performing a very useful service as, for example, in the continuation instruction for mothers instituted by the Rochester (N. Y.) public schools and the course in infant hygiene and feeding given by nurses of the New York City Board of Health to mothers weekly at recreation piers, public playgrounds, and social centers.[1]

Section 9. THE DAY NURSERY AND TRAINING IN CHILD CARE.

The day nursery has been developed in urban communities to take care of the child of the working mother who must earn a supplemental income, because of the temporary or permanent disability of the main wage earner. Those concerned with many nurseries have made it a fundamental point in their creed not to accept the care of children in families where the man is at work. Sound policy demands that the man's earning capacity be increased rather than that the housewife go out from the home and earn supplemental wages. There are numberless cases, however, in every good-sized community, in which there is no man wage earner or in which the man is temporarily disabled and the woman must earn. It is in such cases that the nursery can help the home without injuring it. The nursery has also attempted a positive service to the home in providing instruction to mothers in child care. Similar instruction has been developed at milk stations, dispensaries, hospitals, and other institutions which come in touch with mothers. A few nurseries, as the Fitch Creche, at Buffalo (recently closed), and the Manhattanville Nursery, of New York City, have attempted to develop schools for girls and young women in the care of infants and small children, with the idea of preparing them for professional service as nursemaids.

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[1] For the transfer of the nurses' art to the home, see the discussion of the teaching of home nursing in connection with home economics elsewhere, Part III of this report, Bulletin, 1914, No. 38, p. 56.

Section 10. HOME-ECONOMICS EXTENSION IN INDUSTRIAL COMMUNITIES.[1]

An effort to improve living conditions as a means to increased industrial effiency is appealing to many far-sighted business men. Schoolmen see that education for better living must include among its objects reaching the working family here and now. The industrial department of the Young Men's Christian Association is experimenting with domestic-science teaching in mining and other industrial communities in West Virginia, Pennsylvania, and elsewhere. The United States Steel Co. has introduced the model housekeeping center into its welfare work at the Lambert mine in the Connellsville district of Pennsylvania and at Gary, W. Va.

A striking example of experiment in this field is the extension work of Winthrop Normal and Industrial College, Rock Hill, S. C., for "mill villages," which includes two special workers, Mr. James L. Carberry, the "special agent of mill village improvement in connection with the United States Department of Agriculture," introducing home gardening work, and Miss Mary E. Frayser, in charge of "home-economics extension work in rural, school, and mill communities." Miss Frayser has kindly furnished information regarding the home economics extension work in mill communities.

In some towns the work is begun without paid assistants, under local leadership, as at the Aragon and Manchester Mills at Rock Hill, S. C. In other towns some local organization furnishes leadership. The King's Daughters at Spartanburg have been the means of erecting a welfare building, with auditorium, classroom, and mother's clubroom. In other towns a paid teacher is supplied, who devotes part of her time to the direction of the community work centering in the school, and secures such local assistance in leadership as she can; such a situation is found at the Pacolet Mills, Pacolet, S. C., where the cottage is used regularly for domestic-science lessons by the schools. In some of the towns a trained worker is put in charge of all the activities which radiate from the welfare house, as at the Hamilton Carhartt Community at Rock Hill, or the Bregan Mills at Anderson, S. C. At the Hamilton Carhartt Mills, Rock Hill, a domestic science graduate is provided, who has charge of a community house, also given by the mills; there she conducts a morning class for children below school age, a woman's club one afternoon a week, a children's story-telling club one afternoon, a sewing club once a week, a night school for the three R's twice a week, a young peoples' social evening once a week, and in addition does friendly visiting in the homes.

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[1] See also extension work of colleges, Part III of this report, Bulletin, 1914, No. 38.

In initiating such activities, the representative of Winthrop College goes to a mill community and interests the mill owners, ministers, teachers, and other leaders, that the movement may have local leadership. She arranges a mass meeting and places before it the plan of a community house and of home betterment and club work, outlining what is done in other towns. A second meeting of the women is called to form a woman's club—

> for the discussion of ways of doing the work of the home, care of the children, etc., so that each may profit by the ideas of all, and have a good time as well, showing that such an organization can become a power for good.

At the first meeting of the women a cooking demonstration, or sewing lesson, with a program and refreshments, increases the interest; an organization is made, officers elected, and the matter of program decided—a cooking class, sewing circle, civic improvement, or relief work for the sick. The latter has proved especially effective as a first-step, with the making of bed linen, nightdresses, etc., to be lent by the club on application. The club meetings for sewing provide opportunity for informal discussion and definite instruction on fly eradication, window-screens, colds, infant feeding, selection of foods, and clothing—

> possibilities of my garden, your method of securing obedience from the child and mine—a wide range of topics, but undertaken with the hope of broadening the outlook; while our specific endeavor is progressing we learn to know each other, grow to feel ourselves a unit ready to undertake some more difficult work.

With a start made, a volunteer leader for a class of girls at work, evening instruction in cooking or sewing may be the next step; by this time the mill authorities are usually interested, and as the program develops a mill cottage is gladly made available as a community center; the preparations for this, cleaning, furnishing, decorating, call out the greatest interest and cooperation. A community entertainment may provide funds for furnishings, books, magazines, cooking utensils, and games for the community house. The "mill" contributes, and soon the new center of inspiration and of home and community betterment is under way as a meeting place for clubs, classes, and social gatherings. Such an educational program, in charge of trained domestic-science workers, means sanitary living, better food, intelligent child care, a better home life, and not less community progress in efficiency, intelligence, and every good thing, wrought out by the cooperative effort of the people themselves. Success very evidently turns on the devotion and wisdom of the trained leader. The women may take the responsibility for the "once-a-week open-house" evenings. "It is splendid to watch the growth in self-reliance and community spirit."

Just now the extension worker is promoting an interest in better-baby contests, after the plan of the Better Baby Health Association. A score card and bulletin is sent by the college to the mother of every baby examined. The mothers of babies which are scored low are asked to consult a physician, to follow the directions given in the bulletin, and to return with their babies in three months for a reexamination.

Section 11. VACATION TRAINING—SUMMER CAMPS AND CAMP SCHOOLS.

The summer camp is becoming not only a means of recreation, but also provides educational opportunities for its members. Handicraft activities of various kinds have commonly been introduced, and in many girls' camps the instruction in household arts is a feature. Ellen Richards once suggested that, as industrial processes are more and more removed from the home, we will come to value our seasons of recreation in the country for the first-hand experiences which they offer children in the arts of living. It is this educational asset which the camps are now developing. Such camps are commonly organized by settlement houses, private schools, the Young Women's Christian Association, churches, and other social and philanthropic organizations. The public-school authorities in certain parts of the country have begun to experiment with the camp, and many proprietary camps have been established.

One of the most interesting school camps is the "Farm Camp and Camp of the Golden Maids," organized by the county superintendent of Page County, Iowa, established in 1909, and opened for girls in 1911. In 1913, 220 students attended, including 75 or 80 girls. There is a 10-day program of lessons in the forenoon, and the afternoon is given over to sports, social enterprises, and the lectures at the Chautauqua where the camp meets. The girls' work includes lessons in cooking and sewing from instructors of the State college; also personal hygiene, canning clubs' demonstrations, and social activities. Contest work is introduced with prizes for neatness, sewing, bread making, and athletics. The boys as well as the girls learn the mysteries of dish washing and sanitation at the camp.

The summer school of Milwaukee County School of Agriculture and Domestic Economy (p. 55) also has something of this character of a vacation school for boys and girls.

The Lanier Camp for Family Life, at Eliot, Me., may be instanced as one camp which has made a serious attempt to add to the usual camp program something of instruction regarding the home arts. The activities include not only camp life, with its accompanying fun and sports, but "the serious productive life of an old-fashioned home and farm environment." The aim of the girls' camp is the development of the girl.

The camp is organized as a working home and has the atmosphere of old-time family life. It gives the right attitude toward the home and some experience in contributing to its permanence. Conditions are crude and simple, and life is planned so that all may cooperate in service. The domestic work is directed and shared by experts, is standardized, and shows the girls, by the way it is done, that the same educated intelligence is required as to organize and manage a business, along with a deal more subtle tact, in that its character must always be, in the largest sense, personal and charitable. * * * In a practice kitchen, independently equipped, is a trained teacher of cooking, with a group of girls helping. This teacher cooperates with the general housekeeper in preparing the meals, and all the work of the practice kitchen is made to supplement and relieve the general cook. In this way the girls work with one who "knows how" in serving an actual need. In the practice kitchen a large portion of the camp bread supply is made. * * * There is a regular hour weekly for mending under direction.

Section 12. TRAINING FOR THE HOME—CAMP FIRE GIRLS AND BOY SCOUTS.

These two voluntary organizations of girls and of boys, respectively, have certain by-products of training which are related to the home. The three stages in the Camp Fire Girls are the wood gatherers, fire makers, and torch bearers, and to pass from the first to second stage the girls must do these among other things: Help buy, prepare, and serve at least two meals for meetings of the camp fire, or two home meals; mend stockings or knitted undergarments, or hem a dish towel; keep a written classified account of all money received and spent for a month; sleep with open windows or outdoors for at least a month; know what to do in certain emergencies; know the chief causes of infant mortality and certain other required things; and, in addition, each girl must present 20 elective honors in health craft, home craft, nature lore, camp craft, hand craft, business, and patriotism. To become a torch bearer the girl must present 15 additional honors.

The activities in these seven groups represent all the phases of woman's work. They are to make for status in that work. After a certain kind of work has been dignified, it is done in a very different way from what it was before.

An organization of a local group of Camp Fire Girls affords an opportunity for teachers, church workers, and others to undertake a kind of work with adolescent girls which, among other things, will give rich returns as regards the home. (Address: Camp Fire Girls, New York City.)

The Boy Scouts have a somewhat similar discipline for boys.[1]

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[1] Address, 200 Fifth Avenue, New York City.

Section 13. CORRESPONDENCE SCHOOLS OF HOME ECONOMICS.

The American School of Home Economics was chartered by the State of Illinois about 10 years ago to give instruction by correspondence. The school, up to 1914, has registered 15,000 persons, who have taken either a reading course, a partial course, or the entire correspondence course. The school has issued 12 textbooks on various divisions of home economics, which have been widely used in libraries and schools, as well as by its own students. These books, which are published in several editions, may be secured either independently or in a reading course arranged by the school, or in its regular correspondence course with lessons by mail. The school maintains for its members a circulating library, a purchasing department, and house-building bureau; it lends lecture manuscripts and lantern slides; and offers services to women's clubs.

Other correspondence instruction in home economics has been projected by the proprietary institutions, which have developed the method of teaching technical subjects by mail.

Elsewhere a statement has been made of correspondence instruction undertaken by the colleges, and the home woman interested in studying household problems by correspondence will do well to make inquiry at the department of home economics of the State college or university of her State.

Section 14. LIBRARIES AND EDUCATION FOR THE HOME.

It is obvious that the library can aid greatly in the popular movement for home education. Public libraries accordingly have as a matter of course included books on housekeeping and housekeeping magazines in their collections. The library may render special service in this field by bringing together its housekeeping books in an open reference section where they may be readily consulted by the housekeeper.

Women's clubs have, in many communities, cooperated with the library in developing its collection of household books. The Ontario Library Association, to cite a Canadian example, has been at special pains to print in its annual list suggestions as to recommended books on the household. It has been suggested that the larger libraries might experiment with a consulting adviser or reference librarian, who would specialize in household subjects, and that the work for housekeepers in libraries might attain the importance which work for children has assumed in American libraries.

Several libraries have published lists of books on the home; the New York State Library at Albany, N. Y., a bibliography of domestic economy, in 1901; the Chicago Public Library, a pamphlet of recommended titles on domestic economy, in 1906; the Boston

Library, a complete catalogue of its books on domestic science, in 1911. The Chicago list sets a good example of a library publication in this field.

There are possibilities also in circulating libraries on home economics. Thus the Ohio State Library, at the request of the women's organizations, has recently added traveling libraries of home economics with 30 different books in a set, and nearly 500 volumes have been put in circulation. Traveling libraries have also been used in other States—in Kentucky, New York, and elsewhere.

Section 15. JOURNALISM AND THE HOME.

The influence of the periodical press has been important in the movement for home betterment. There are some 120 American magazines entirely devoted to this field, such as the well-known Ladies Home Journal, of Philadelphia; Good Housekeeping, New York; Woman's Home Companion, New York; and others. Most newspapers have a column, or sometimes a page, devoted to the interests of the home. Material for these newspaper departments is sometimes prepared by a special editor, and newspapers which are developing this department have it in their power to render a great service for better homemaking in their own communities. Daily papers have also secured much of their household material from syndicate services which send out either prepared copy or plate material which in turn is prepared by special writers under contract. Some of these departments are repeated in a hundred different newspapers in various parts of the country and reach hundreds of thousands of readers. The greater part of this writing so far has been done by persons who are writers rather than household experts. There is a growing interest, however, among the household technical colleges in household journalism as a profession, and the Iowa State College journalism courses outlined elsewhere are a hopeful beginning.[1]

There are many special periodicals which include a home department, such as the religious press, the agricultural papers, and the organs of fraternal organizations. Mrs. Hutt's remarkable service in this direction in the Progressive Farmer, of Raleigh, N. C., should be mentioned, and the work of the Breeders Gazette in introducing concrete house construction to its readers is a good illustration of the possibilities of well-directed home departments in agricultural papers. The Country Gentleman, of Philadelphia, conducts a department in which authoritative articles on domestic science appear, and the work of the many other agricultural papers in this field deserves warm commendation. It seems important to bring this field to the attention of persons taking training in household science, and also to emphasize its importance to the directors of such publications.

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[1] See Part III of this Report, Bulletin, 1914, No. 38, p. 58.

Section 16. EXHIBITS AND THE HOME.

The exhibit as an educational agency goes back, of course, to the Crystal Palace Exhibition in London, 1851. Its value is well illustrated by the Mary Lowell Stone exhibit of home economics organized by the Association of Collegiate Alumnæ in Boston in 1902, exhibited at the Mechanics Fair in Boston in 1902, then successively at the convention of the collegiate alumnæ in Washington, in various large cities, at the St. Louis Exposition of 1904, and at different colleges; it exhibited the results of researches into the cost of living, economics of laundering, hygiene of clothing, etc. Another exhibit, more popular in nature, was the Homemakers' Exhibit and Conference, organized by the School of Domestic Art and Science, of Chicago, in November, 1912, which attempted to show definite methods of improving homemaking, of promoting health, and reducing the cost of living, of adapting labor-saving devices and time-saving methods, of arousing interest in artistic and economic clothing. Accompanying the exhibit there were daily lectures by school and college teachers of home economics. Another type of exhibit of which there are many instances is the pure-food exhibition, usually organized with a commercial purpose and failing in its educational possibilities for this reason. It is noteworthy that the Federation of Women's Clubs has recently, through its home economics committee, urged that commercial food shows be discouraged, and that exhibits with an educational purpose be held.

Exhibits of home products and contests.—Interest in the homemaking industries, as sewing, cooking, and food preserving, and in related household arts and management, is stimulated by means of public exhibitions of the products of such arts. Exhibits may display such products (*a*) from the work of instruction in the school, (*b*) from the home work of school children carried out under the stimulus of the school, or (*c*) from the work of adult homemakers themselves. Each has its particular value. Exhibits, accordingly, have been arranged by schools of various grades; by either local, county, or State granges; by local, county, and State fair associations; by women's clubs and other organizations. The stimulus of competition has been commonly utilized by scoring the products and awarding prizes. Such exhibits will primarily improve the quality of home products for home use and thus improve living conditions. The educational value of such competitive exhibits has been urged as a reason for their use by schools and apparently with justification. Several bulletins and papers have recently dealt with this subject: "Educational Contests in Agriculture and Home Economics for Use in Farmers' Institutes and Agricultural Extension Work," (Bulletin 255, Office of Experiment Stations, U. S. Department of Agriculture, 1913), which besides making general suggestions, outlines some 28 contests, of which the following especially concern the household: Butter making, bread making, canned fruit, sewing (separate contests for girls 10 to 14, 15 to 18, and for women), lunch boxes, house decoration and furnishing, cellar plans, kitchen plans, household-expense contests, home compositions (essays on home life), and flower gardens. Another study of much value for its suggestions regarding a particular division of the field, namely, horticultural products of household industry, is a paper on "Exhibiting, Classifying and Judging Homemade Horticultural Products." by Prof. J. B. S. Norton, of the Maryland Agricultural College, College Park, Md.[1] Its suggestions as to the preparations necessary for the exhibit, classification of products with appropriate definitions, rules for judging and scoring, and the educational features of exhibits are most excellent; some ten score cards are presented for different fruit products. Several other publications have appeared on this problem: A bulletin on "Judging Bread," by the University of Illinois; another on "Home Economics Exhibits," by the Iowa State College, Ames, Iowa; and a circular on "Scoring Exhibits," by the department of home economics, University of Missouri, Columbia; besides various discussions in the directions issued to boys' and girls' contest clubs in different States.

Child-welfare exhibits.—A public exhibition intended to emphasize the agencies making for child welfare, to point out untoward conditions and suggest remedial action, was held in New York in 1911, and similar exhibitions have since been held in Chicago, Kansas City, Northampton, Mass., St. Louis, Buffalo, Montreal, Rochester, Louisville, Providence, Peoria, and other cities. Starting with the New York exhibition, a national educational movement, for the promotion of such exhibits, has been organized as the National Child Welfare Exhibition Committee (address, 200 Fifth Avenue, New York City). The child-welfare exhibition presents its facts through wall exhibits, arranged as uniform screens; three-dimension exhibits and living exhibits. Its usual divisions are: Health, homes, schools, recreation, county life and rural education, moral and religious life, child and the law, industrial conditions, philanthropy, settlements, and educational movements. The committee has published a series of bulletins giving directions regarding the organization of exhibits (25 cents for sample set); and it loans chart exhibit material to local organizations. The department of surveys and exhibits of the Russell Sage Foundation, New York, is also prepared to lend exhibits and to render special service in the preparation of exhibit material. The American Home Economics Association (Roland Park, Baltimore, Md.) has a special exhibit on school lunches for loan.

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[1] May be secured through Journal of Home Economics, Roland Park, Baltimore, Md., 25 cents.

Section 17. UNITED STATES GOVERNMENT AND HOME BETTERMENT.

While the Federal Government has no "home bureau" or "domestic science bureau," the desirability of which has sometimes been urged, it does at many points in its administrative service undertake matters having very direct reference to home betterment. The Department of Agriculture with its Farmers' Bulletins on home problems, its "nutrition investigations," which deal directly with the food problem of the household, and its supervision of foods and drugs under the meat-inspection service and the "pure-food law"; the United States Bureau of Education, which gives attention to education for the home; the Public Health Service in the Treasury Department; and the new United States Children's Bureau—these are all to be mentioned as undertakings of the Federal Government which are of major importance to the home. A word of detail may be given as to certain of these, also as to the proposed Federal legislation which would provide further definite action for home betterment.[1]

Section 18. THE DIVISION OF NUTRITION INVESTIGATIONS, OFFICE OF EXPERIMENT STATIONS, UNITED STATES DEPARTMENT OF AGRICULTURE.

This division carries on scientific studies of human nutrition, publishes in both scientific and popular form material related to nutrition, and is a national clearing house and center of information for teachers, homemakers, and others as regards problems of nutrition and related fields. This work in nutrition investigations, which was established in 1894 under the direction of the late Prof. W. O. Atwater, has had an important influence in the development of American scientific work in nutrition, and in furnishing subject matter for instruction, both technical and popular, in the field. The studies made have comprehended various branches of the subject, including food materials, their preparation for human use, the consumption of foods by individual families and institutions, the digestibility of foods, and the fundamental principles of nutrition. The publications include, first of all, "technical bulletins," scientific in character and intended for technical workers and investigators, of

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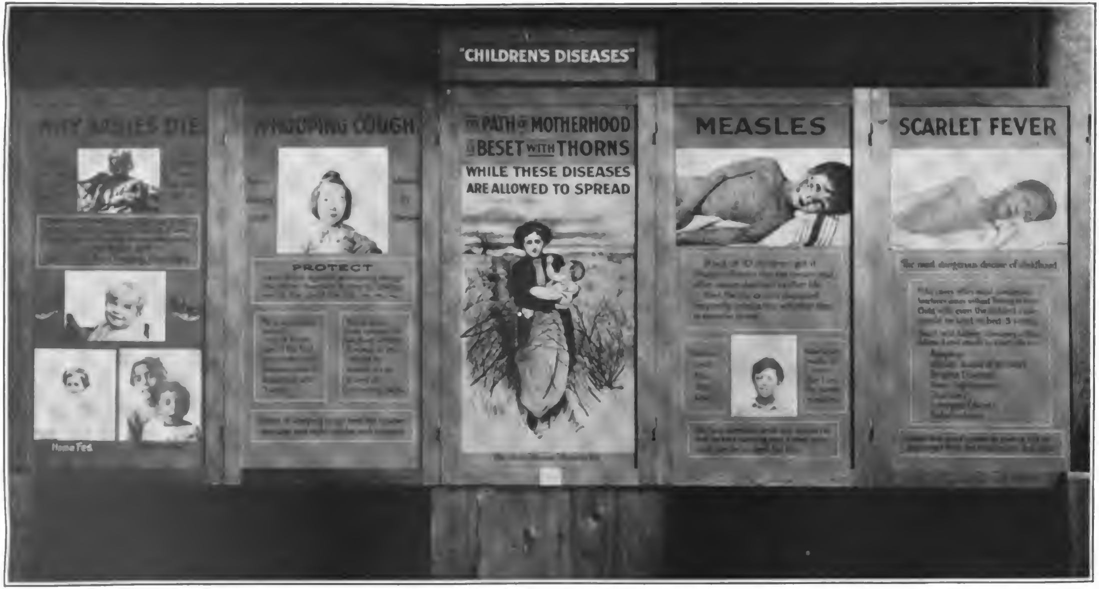
[1] See the bibliography given in Bulletin, 1914, No. 39 (Part IV of this report) for a number of Government contributions to home betterment.


"CHILDREN'S DIESEASES"
WHY BABIES DIE
Home Fed
WHOOPING COUGH
PROTECT
THE PATH OF MOTHERHOOD IS BESET WITH THORNS
WHILE THESE DISEASES ARE ALLOWED TO SPREAD
MEASLES
SCARLET FEVER
The most dangerous disease of childhood

A TYPICAL EXHIBIT USED IN CHILD WELFARE WORK, NATIONAL CHILD WELFARE EXHIBITION COMMITTEE, NEW YORK.

which some 60 have been issued with a circulation of about 240,000 up to 1913. These technical bulletins present scientific data on experimental methods, results of nutrition experiments and investigations, and similar subjects. Of great significance are the popular pamphlets on nutrition issued in the "Farmers' Bulletins" series, of which some 25 had been issued up to June, 1913, with a total circulation of 12,193,000; in the single year 1912–13, this circulation, which is entirely in response to demand, was 2,225,000, including 315,000 copies of a single bulletin, that on "Economical Use of Meat in the Home." These Farmers' Bulletins on nutrition, listed elsewhere,[1] have been widely used by teachers in schools and colleges, in addition to their circulation directly into private homes; they have without doubt been the strongest single factor in popular education regarding home betterment in America. A third form of publication are the briefer "circulars" in connection with nutrition investigations, of which 30 have been issued up to 1913, with a total circulation of 127,600; a typical one of these and one which has had wide use is on "The Function and Use of Food." Two series of charts have also been issued: Four charts on food and diet and fifteen on the composition of food materials. A bibliographical work of great scientific importance which is also carried on is that of abstracting the current literature of nutrition. These abstracts are published by the Department of Agriculture in the Experiment Station Record, and in a single year, 1909–10, comprised 642 subjects, extending over 123 pages.

The nutrition investigations are under the supervision of the Director of the Office of Experiment Stations, Dr. A. C. True, and in immediate control of Dr. C. F. Langworthy, chief of nutrition investigations, who is assisted by a staff of scientific workers. There is provided at Washington a considerable scientific equipment, including laboratories with appropriate facilities for research.

While the scope of the nutrition investigations has been restricted to the subject of nutrition there has been a constant and growing pressure upon the Department of Agriculture from teachers of home economics, and others interested in home betterment, for an extension of the investigations to cover other aspects of the rural home, such as textiles and household appliances, and in general the whole field of home management. The Secretary of Agriculture in 1914 recommended such an extension of the nutrition work, and Congress provided for it in the appropriation of the year. Much of the scientific equipment of the nutrition laboratories, for example the respiration calorimeter, can be applied in studies of textiles, energy studies of household appliances and labor, and related problems which concern the more efficient management of the home. It is believed that thus there would be supplied a basis of scientific facts greatly needed for developing instruction in textiles and household management, comparable to that already secured in nutrition. The importance of leadership in these newer fields of household science can not easily be overestimated.[1]

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[1] See bibliography given in Bulletin, 1914, No. 39 (Part IV of this report).

Supervision of food materials.—The supervision of foods and drugs by the Federal Government in enforcement of the Food and Drugs Act of 1906, is carried on under the United States Department of Agriculture, Washington, D. C., which will furnish information on request. It is important to remember that the Federal act affects food and drug products only which go into inter-State commerce, that is, are sent from one State to another. In the individual States legislation has been generally adopted to establish standards regarding food produced and consumed within the State. The United States Department of Agriculture also has control of the inspection of abattoirs and meat-packing houses which ship their products in interstate commerce. Again in this field it has no concern with local abattoirs the products of which are consumed within the State where they are produced.

Section 19. UNITED STATES CHILDREN'S BUREAU.

The United States Children's Bureau, of the Department of Labor, Washington, D. C., was established in 1912. It is to—

> investigate and report to said department upon all matters pertaining to the welfare of children and child life among all classes of our people, and shall especially investigate the questions of infant mortality, the birth rate, orphanage, juvenile courts, desertion, dangerous occupations, accidents and diseases of children, employment, legislation affecting children in the several States and Territories.

The Children's Bureau has published bulletins as follows: "The Children's Bureau"; monograph No. 1, on "Birth Registration"; Infant Mortality Series No. 1, "Baby-Saving Campaigns" (a preliminary report on what American cities are doing to prevent infant mortality); Care of Children Series No. 1, "Prenatal Care," by Mrs. Max West; Part 1 of "Handbook of Federal Statistics of Children"; "First Annual Report"; Care of Children Series No. 2, "Infant Care"; "Compilation of Child-Labor Laws of the Several States"; "Report of Infant Mortality Investigation."

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[1] Origin and development of the nutrition investigations of the Office of Experiment Stations, Report of Office of Experiment Stations, 1900, pp. 449–460. For lists of nutrition publications, see Office of Experiment Stations Circular 102 (1910); Relation of nutrition investigations to questions of home management, Report of Office of Experiment Stations, 1907, p. 355; Department of Agriculture Yearbook, 1911, p. 144; Reports of Office of Experiment Stations, 1911, pp. 30, 36, and 1912, pp. 30, 31; Report of Secretary of Agriculture, 1912, pp. 109, 110, 221, 224; Journal of Home Economics, 5, 455.

The importance of the bureau's public work in promoting measures for safeguarding children and promoting their welfare can not be overestimated; home women will find its bulletins on the care of children very practical.

Section 20. FEDERAL GRANTS FOR EDUCATION FOR THE HOME.

The United States Congress passed in 1914 the Smith-Lever bill providing for an appropriation of $10,000 to each State in aid of extension teaching of agriculture and home economics, with additional grants proportioned upon rural population. The Federal administration of the law is lodged with the United States Department of Agriculture and in each State with the State college of agriculture. The law requires the States to make an appropriation in addition to the grant received from the Federal Government. The Federal aid is extended to make possible the adequate development of State systems of extension teaching to reach the farm and the farm home. This law makes possible important progress in home-betterment work for rural districts. Inquiry should be made by persons interested at the State college or university or directly from the United State Department of Agriculture.

The proposed Smith-Hughes bill, following the recommendations of the national commission on national aid to vocational education, which reported to Congress in June, 1914, provides that Federal aid shall be given the various States in establishing a system of training for agricultural, industrial, and household vocations. An appropriation of $200,000 a year is to be given a proposed Federal board for vocational education, for administration, and for studies, investigations and reports, on subject matter and methods of teaching these vocations. An appropriation aggregating $1,000,000 for vocational teachers is to be divided among the individual States, according to population. Next, a fund is provided for aiding State systems of agricultural teaching, beginning at $500,000 and increasing to $3,000,000 by 1924, which is to be divided among the States in proportion to their agricultural population; and a similar sum for education in the industries is to be divided on the basis of urban population. Each State must provide funds, either by State or local action equal in amount to that granted by the Federal Government. The grants are designed especially to aid the training of boys and girls of 14 years of age or older in all-day or part-time vocational schools and in day and evening continuation classes in agricultural, industrial, and household callings.

A third proposal is that of Senator Smoot to provide a grant of $10,000 to each State agricultural experiment station for research work and publication in home economics. This bill is heartily approved by those who recognize the great need in home economics of establishing its fundamental facts by scientific research and investigation.

Another bill is that introduced by Mr. Wilson, of Illinois, to provide for a Bureau of Domestic Science in the Department of Agriculture. Such action would provide the needed national leadership, especially in research and investigation. It is but fair to say, however, that the recent extension by Congress of the scope of the "nutrition investigations" in the United States Department of Agriculture to include problems in the utilization of textiles and in household management gives, in effect, this much-needed national bureau of research and information on foods, clothing, and shelter.

The United States Bureau of Education is now giving special attention to education for the home. The position of specialist in home economics has been created in the bureau, and home-education workers regard this as an important step.

Section 21. STATE GOVERNMENTS AND HOME BETTERMENT.

In addition to the general work of education for home betterment which is developing under State authority, and with which this whole report deals, the State government in its various administrative activities performs many services of direct significance to the home.

There is commonly State legislation for the control of food industries the product of which is made within the State for consumption within the State and which, therefore, is not subject to the Federal food law, and also for the supervision of food materials shipped into the State for local consumption, which thereby become subject to State law.

The State food work is organized in some States under the department of agriculture, in some as a part of the health department, and in some independently. An inquiry to the Secretary of State at the capitol will bring information. The food departments in all States are doing work of great interest to housewives; in some States the food publications will be found a source of practical information. To cite an example, the Special Bulletin, Food Department, of the Agricultural Experiment Station, North Dakota presents monthly not only new regulations and decisions, but discussions of food materials, sanitary laws, etc., in which the home is vitally interested. In the same connection reference should be made to the food work of local boards of health, as illustrated by that of Westfield, Mass., which has published lists of recommended food.

State boards of health.—Much of the work of boards of health, State and local, is directly related to the home, and health progress requires a popular education which will reach the home. This is illustrated, for example, in the 1912 report of the commissioner of health of Virginia, which explains the work of his office for rural sanitation, especially in behalf of pure water supply and sanitary toilet facilities. It has conducted educational work through newspapers, popular publications, lectures, and exhibits. Plans for sewage-disposal plants for private homes were prepared. Other States are at work on similar plans attempting to reach the home as a central problem in the health situation.

State supervision of markets, at least as regards weights and measures, is common; the work of the New York State bureau, Albany, N. Y., under Mr. Reichman, has attracted wide attention. Action in this field may be municipal as in the effective mayor's bureau of weights and measures of New York City; one of its reforms was securing the container law requiring the net contents of food packages, cartons, etc., to be stated on the wrapper. The problem of market organization is just now attracting attention, and State action seems likely, as in the proposed Wisconsin "market commission," and the New York State superintendent of markets; municipal governments of course are intimately concerned with providing better market facilities, and the Federal Government, through the Department of Agriculture, is working on this problem.

Section 22. SCIENTIFIC STUDY OF HOUSEHOLD PROBLEMS—PROPOSED EXPERIMENT STATIONS.

American scientific study of nutrition, beginning essentially with the late Prof. Atwater, of Wesleyan University, has enlisted scientific research of high rank at Yale University, Harvard University, Cornell Medical College, Columbia University, University of California, Johns Hopkins University, Northwestern University, University of Illinois, University of Wisconsin, to mention only some of the leading university laboratories; also in the division of nutrition investigations of the United States Department of Agriculture, and in some of the State agricultural experiment stations. The Carnegie Nutrition Laboratory at Cambridge, Mass., is also to be mentioned as an important scientific undertaking in this field.

Some scientific studies have also been made of textiles from the viewpoint of the user, as at Teachers College, Columbia University, the University of California, and elsewhere. The question of fibers and fabrics as adapted to various purposes, of reactions to light, heat, sunshine, rain, and bodily moisture; of endurance or wearing quality; of grading and standardizing; of the proposed labeling of fabrics for the benefit of the consumer are all worthy of careful study, not to mention the general economic aspects of clothing, the social problems of mode and fashion, and the æsthetic possibilities of dress.

Housing problems have also been approached in research, as in studies of ventilation and sewage, of the lighting and heating of dwellings, and kitchen equipment, at the Massachusetts Institute of Technology; engineering laboratory of the University of Missouri; the model house at the University of Illinois and elsewhere. There are numerous problems which merit critical study, as the materials of house building, house plans, with special attention to convenience in doing housework, and such matters as sleeping porches in cities, provision for children, for the sick, rural housing, institutional housing of all kinds—hospitals, dormitories, etc.; house fixtures and equipment; labor-saving machinery and devices. Painstaking and critical study of domestic architecture is worthy of scientific attention to the end that human health may be promoted, energy-waste in housework eliminated, costs of construction reduced, and in general proper standards for city, town, and rural housing established.

The economic and social problems of the home, as comprised in the field of household management and the community relations of the family group, have scarcely been approached by the scientific method. As regards management problems there are two notable American studies of household service, one undertaken by a university professor of history and economics ("Domestic Service," Lucy M. Salmon, 1896), and the other by a group of public-spirited women in Boston, with university affiliations (Report of the Household Aid Co., Boston, 1902–4[1])—an experiment in furnishing trained household "aids" by the hour on call. As regards wider social studies of the home, there are the investigations of household budgets of industrial families made by labor bureaus, settlements, and charity organizations, which one finds well summarized in Streightoff's "Standard of Living Among the Industrial People of America," and Nearing's "Financing the Workingman's Family."

Certainly in the problems of food, clothing, shelter, household management, and the economic and social relations of the family group, viewed from within and viewed from without, both for the domestic home and the institutional household, there are most promising fields demanding that kind of unbiased patient study that science gives. The college and university laboratory will do much more in this field than has thus far been indicated, and if Government experiment stations are also given funds for research in home economics, lasting foundations will be formed for the art of right living. The Smooth bill[2] proposing Government aid for research in this field has appealed to many as the most certain method in the proposed national legislation to aid education for the home. Home progress is most fundamental to welfare, and yet slowest to come, because of the isolated detached position of the individual home unit, which by its unique nature is not open to the competitive influences which vitalize practically every other human enterprise.

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[1] May be obtained through Journal of Home Economics, Roland Park, Baltimore, Md.

[2] See p. 179.

Mention should be made in this connection of two or three private undertakings in this field of household experimentation. Mr. and Mrs. Charles Barnard established at Darien, Conn., a few years ago, a "Housekeeping Experiment Station," which published a number of useful bulletins on household equipment. Two years since the station was purchased by Mr. and Mrs. Alfred T. Child, who have continued it at Stamford, Conn., while Mr. and Mrs. Barnard have organized another "station" at Pasadena, Cal. Mr. and Mrs. Child, who are trained workers, have investigated kitchen and cooking problems which have been reported in a recently published book, "The Efficient Kitchen" (McBride, Nast & Co.), and are prepared to render service in lectures, consultations, kitchen planning, information, etc. "The Housekeeping Experiment Station of the New Jersey Federation of Women's Clubs" which was maintained for several years by Mrs. Mary Pattison at her home in Colonia, N. J., brought together selected types of labor-saving machinery. A book reporting the work of the Colonia station, "Domestic Engineering in the Servantless House," is soon to be published by Mrs. Pattison. Another recent enterprise is Mrs. Christine Frederick's "household efficiency kitchen" at her Greenlawn, Long Island home, which has aimed to apply to household problems, shop efficiency methods; her results have been reported in magazine articles, in a book, "The New Housekeeping" (Doubleday, Page & Co., 1913), and in a bulletin, "The New Womanhood Magazine."

Section 23. THE AMERICAN HOME ECONOMICS ASSOCIATION.

The American Home Economics Association is a professional society including in its membership teachers in schools and colleges, professional workers in hospitals, college dormitories, lunch rooms, and other institutional households, and many home women who take a scientific interest in household progress. The association is the direct outgrowth of the Lake Placid Conference on Home Economics, which was organized in 1899 by Mr. and Mrs. Melvil Dewey, of the Lake Placid Club of New York, and the late Ellen H. Richards, of the Massachusetts Institute of Technology. The Lake Placid conference held annual summer meetings for 10 years and a winter meeting for 3 years, with an educational section devoted to problems of home economics teaching. In 1908 the conference which had been a personally conducted meeting of leaders was merged in the American Home Economics Association which held its initial meeting in January, 1909, starting with a membership of upward of 1,000 and establishing the Journal of Home Economics, a professional paper devoted to this field.

The association holds annual national meetings and has many local branches in different cities and States, as well as a vigorous section devoted to institution management problems. The Journal of Home Economics is a publication of 10 issues a year, with about 600 pages of reading matter containing articles on scientific and practical topics for teachers, for persons concerned with institution management, and for those interested in the problems of the home. The journal began in February, 1914, a special housekeepers' section which will present the results of laboratory and other scientific studies in practical form for the housewives' use. The journal publishes the scientific papers presented at the various meetings of the association and includes a comprehensive bibliography of current literature in home economics. It is published at Roland Park, Baltimore, Md.

The association assisted in maintaining for several years the graduate school of home economics, intended particularly to present the latest progress in this field of applied science. It had its rise in a summer school organized by the late Prof. Atwater, at Wesleyan University. The successive meetings of the school were held at the University of Illinois, Cornell University, Iowa State College, and Michigan State College; but in view of the development of graduate work in the universities, the school has now been given up.

The basis of organization for the association provides for individual membership and also for the affiliation of local societies. Among the branch associations are the following: The Home Economics Associations of New England, Connecticut, Greater New York, New York State, Philadelphia, Washington (D. C.), Ohio, Detroit, Grand Rapids, Michigan, Chicago, Iowa, Missouri, Utah, Texas, Seattle, Nebraska, and the Pacific coast. The presidents of the association have been the late Ellen H. Richards, of the Massachusetts Institute of Technology; Prof. Isabel Bevier, of the University of Illinois; Dean Sarah Louise Arnold, of Simmons College, Boston: and Prof. Martha Van Rensselaer, of Cornell University. In addition to its annual and local meetings, the association carries on investigations, the results of which are published. Among the noteworthy pieces of work so accomplished are the reports on education, elementary and secondary and collegiate, of the Lake Placid conference; the "syllabus of home economics," compiled by a committee of the association; reports on institutional accounting, school lunch work, and on laundries; and the establishment of a fund for research and publication in memory of Mrs. Richards. The purpose of the association, as stated in the constitution, is "the bettering of conditions in the home, the school, the institution, and the community." The association publishes a number of pamphlets and bulletins.[1]

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[1] See bibliography, Part IV of this report, Bulletin, 1914, No. 39.

Section 24. THE NATIONAL LEAGUE FOR THE PROTECTION OF THE FAMILY.

The New England Divorce Reform League, organized in 1881, renamed as the National Divorce Reform League in 1885, and later the National League for the Protection of the Family, has concerned itself with—

> the improvement of public sentiment and legislation to protect the institution of the family, especially as affected by existing evils relating to marriage and divorce, and to secure its proper efficiency in individual and social life.

The annual reports of the league are a source of information regarding the progress in legislation and social efforts for the protection of the family institution. That it has done a work of publicity and education of great value is recognized by students of the field. The corresponding secretary of the league from its beginning was the late Rev. Samuel W. Dyke, Auburndale, Mass., who devoted himself to investigation and publicity work on the divorce problem in America, beginning about 1878. This organization has largely stimulated the modern public discussion of this matter and secured statistical investigations by the Government; it has aided in drafting laws and in forwarding the movement toward uniform legislation on marriage and divorce. It has contributed to the fundamental need in this field, the development of ideals to control home life. Its phrase "protection of the family" indicates one important end point in education for the home of which the present home-economics education movement is not yet adequately conscious.

The secretary of the league is Rev. John L. Seawell, 11 Foster Street, Worcester, Mass.

Section 25. INTERNATIONAL CONGRESS ON HOME EDUCATION.

The first congress was held in 1905 at Liege, the second congress in 1906 at Milan, and the third congress in 1910 at Brussels. The fourth congress was to be held in Philadelphia September 22 to 29, 1914, but had to be postponed because of the European war. The congress is composed of individuals and representatives of organizations interested in home training and the welfare of childhood and youth. The program comprises nine sections, as follows: Child study; family education; before school age; during school age; after school age; abnormal child; organizations relating to childhood; vocational relations between home and school.

National committees have in charge the arrangements in some 15 different countries. The president of the congress is Dr. M. G. Brumbaugh, superintendent of the Philadelphia schools, and the general secretary is Mrs. J. Scott Anderson, directress of Torresdale House, Torresdale, Philadelphia.

International Congress for the Teaching of Household Economy.—An international congress has been twice held in Europe on the teaching of household economy, the proceedings of which are available. The second congress was held during the International Exhibition at Ghent, Belgium, June, 1913. Representatives from America attended the congress and contributed to the program a valuable series of papers on the organization of home-economics teaching in the United States. Many of these papers have been reprinted in the Journal of Home Economics.

The international office of domestic economy, Fribourg, Switzerland, is an outgrowth of these congresses; this office has a membership of persons in various countries, publishes a bulletin, and is charged with organizing future meetings of the congress.

Section 26. MOTHERS' CONGRESS AND PARENT-TEACHERS' ASSOCIATIONS.

The National Congress of Mothers and Parent-Teachers' Associations is devoted to "child welfare in home, school, church, and state." It aims to raise standards of home life and of training for parenthood, to bring home and school into closer relations, to secure legislation for juvenile courts and special officers, to provide probationary care of children in individual homes rather than in institutions, and, in general, to work for all measures for the betterment of homes and the standards of child care. The mothers' congress, which was formed in 1897 by Mrs. Theodore W. Birney and Mrs. Phoebe A. Hearst, is a national organization, with State organizations in about 30 States, and with several hundred local mothers' circles, parent-teachers' associations, and other affiliated organizations which altogether embrace nearly 100,000 members. National meetings are held each year, and an International Congress on Child Welfare is held every third year in Washington, D. C. The congress has departments of work as follows: Education, children's books, mothers' literature, home economics, juvenile court and probation, child hygiene and prevention of infant mortality, child labor, rural child welfare, legislation, playgrounds, loan papers on child nurture, marriage sanctity, children's literature, and book lists for mothers.

Especially notable is the form of local organization, the Parent-Teachers' Association, which has been a force in many communities in uniting home and school interests that educational leaders have spoken of highly. The congress has done a national work of great importance, too, in bringing together mothers in its local mothers' circles, "mothers' child study circles," "young mothers' league," "women's clubs," etc., which have provided a flexible form of organization for the study of home problems by home women. The national office of the congress in Washington sends out loan papers for club use for a small fee, and the Child Welfare Magazine, organ of the congress, is designed especially to help local organizations with programs and papers. A recent number of the magazine contains among other articles the following: Moral training in Sunday school: Recreation for country girl; Department of child hygiene; Parents and their problems; Child labor; Program of parent-teacher associations for the month.

Local organizations affiliate with the congress by paying a small fee. Active membership in the congress is restricted to delegates from State, local, and affiliated organizations: individual persons may join as associate members for a $3 fee, which includes a subscription to the Child Welfare Magazine.

The officers of the mothers congress are: President, Mrs. Frederick Schoff, Philadelphia; corresponding secretary, Mrs. Arthur A. Birney, Loan and Trust Building, Washington, D. C. Clubs affiliated with the congress have been organized in Cuba, China, Japan, and England, and a similar national congress is projected for Argentina.[1] A large part of the educative work done by the organization has now been centered in the home education division of the United States Bureau of Education.

Section 27. NATIONAL HOUSEWIVES LEAGUE.

This "national movement for the federation of housewives" was organized a few years ago and is intended "to uphold the enforcement of laws which affect food supplies, the family health, the cost of living, and to secure further legislation, when necessary, toward that end." The organization is national; it has been extended by individual membership, and especially by the affiliation with the league of societies which organize a housewives league department. In January, 1914, the total affiliated membership is estimated by the national president of the league, Mrs. Julian Heath, of New York, as numbering upward of 700,000.

In the official statement—

> members are requested to insist upon full weights and measures; to insist upon cleanliness in the handling of food; to protest against the exposure of all food to contamination, and to refuse to purchase such food; to read carefully all labels on canned and bottled goods, and to report any violation of the pure food and drugs act; to make personal investigation into the sanitary condition of markets; to, as far as possible, refuse to purchase cold-storage poultry, fish, butter, eggs, fruit, etc., which have been held to the detriment of condition or advancement of price.
>
> In justice to tradesmen, members are also requested to so plan their orders that but one delivery a day is required; to pay cash or settle all credit accounts

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[1] See also Parents-Teachers' Cooperative Association, U. S. Bureau of Education Report, 1912, vol. 1, pp. 359–373.

promptly; to refrain from handling articles of food that are exposed for sale; to patronize tradesmen who comply with the law; to give preference to food-distributing stores that close not later than 7 p. m.

The national and local leagues have furthered market investigations and in several instances joint action of housewives in "price strikes" refusing to purchase butter and eggs when prices were high. The official organ of the league is The Housewives League Magazine, New York.

Section 28. THE ASSOCIATED CLUBS OF DOMESTIC SCIENCE.

The associated clubs of domestic science is an affiliation of local organizations with national officers who conduct a department in the National Food Magazine (New York). The president is Mrs. Lily Haxworth Wallace, 1436 Pacific Street, Brooklyn, N. Y.

Section 29. INTERNATIONAL CONGRESS OF FARM WOMEN.

This is the title of an American-Canadian organization auxiliary to the International Dry-Farming Congress (of which it forms the rural home section) which brings together at its annual meetings women interested especially in the betterment of the rural home; it is also the title of an international organization meeting in Europe. At the recent eighth annual meeting of the Dry-Farming Congress in October, 1913, at Tulsa, Okla., the American Congress of Farm Women presented a program which—

> included physical and mental betterment, social and religious life, the care of children, their food, clothing and education, home sanitation, cooperation between producer and consumer, and other similar subjects, together with vocational occupations for farm women, including dairying, poultry culture, etc. Demonstrations in all branches of the work were carried on each day, including the actual cooking and serving of meals in a model farm kitchen. One building was devoted to a complete exposition of farm-home products, which included canned fruits, vegetables, meats, pickles, butter, bread, etc. There were a number of individual and collective exhibits from counties and districts, from farm-womens clubs, schools, etc., and a special department for boys' and girls' classes. A valuable feature was an exhibit for the farm home of time and labor saving devices which were displayed in a model farm kitchen.

The officers in 1913 were: President, Mrs. Belle v. D. Harbert, Manzanola, Colo.; secretary, Mrs. Eleanor L. Burns, Lethbridge, Alberta, Canada.

The third International Congress of Farm Women (Cercles de Fermières) met at Ghent, Belgium, during the International Exposition of 1913, with an organization representing various countries of Europe and America, including the International Congress of

Farm Women (American) referred to above. The Ghent program included three sections: I. Farm women's associations; II. The professional rôle of the farm woman in dairy work, poultry, etc.; III. The farm woman as mother and manager; with topics—the education of the family; infant hygiene; advice relative to hygiene, the furnishing and ornamentation of the dwelling; practical advice on the rational feeding of the people on the farm; the utilization and preservation of vegetables and fruit; methods which women can use for supervising the professional education of their children and for keeping them in the country; how women can organize amusements on the farm, such as lectures, songs, etc. (Address of the congress: Miss Van Aarschot, 38 Rue du Pépin, Brussels.) Associations of farm women exist in Austria, Hungary, France, Ireland, Poland, Belgium, and other European countries.

Section 30. THE NATIONAL SOCIETY FOR THE PROMOTION OF INDUSTRIAL EDUCATION.

While this organization has been especially interested in the training of young people for wage-earning occupations, in the promotion of which it has furnished a country-wide leadership, it has not overlooked the relations of housekeeping as a vocation to the program of industrial training and of the need of training in household arts as a necessary item in the curriculum for the industrial training of girls. The society in promoting legislation for industrial education has consistently included vocational education in household arts along with industrial, agricultural, and commercial training. For example, the revised legislation of New Jersey, Pennsylvania, and Indiana, drafted with the help of the society and adopted in 1913, all provide definitely for continuation education in household arts.[1] In practically all State systems of industrial education, training in housework can be provided on the same basis as for any other trade or profession, and provision is also possible for evening or day classes for the training of wage-earning women and home women in the arts of the household. This comprehensive view of housework and of providing training for it in connection with this new legislation, we owe in part to the leadership furnished by the national society. The society now has a special division of work concerned with industrial training of women. It has a bureau for the registration of teachers of the household arts. It is aiding in the drafting of new industrial education laws; it is promoting studies and investigations of industrial education; it publishes bulletins and other material. The society may be addressed at 140 West Forty-second Street, New York City.

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[1] See Part I of this report, Bulletin, 1914, No. 36.

Section 31. THE AMERICAN ASSOCIATION FOR THE STUDY AND PREVENTION OF INFANT MORTALITY.

The American Association for the Study and Prevention of Infant Mortality, formed in 1909 at a meeting under the auspices of the American Academy of Medicine, is engaged in an aggressive campaign to reduce the great wastage of infant life. The association unites in its membership physicians, nurses, teachers, and other leaders; holds annual conventions of which published reports are available; and maintains a permanent office at Baltimore, Md. It has committees on vital statistics, eugenics, obstetrics, pediatrics, nursing, and social work, and on continuation schools of homemaking, of which latter Dr. Helen C. Putnam, of Providence, R. I., is chairman.

Dr. L. Emmett Holt, of New York, president of the association, 1912–13, summarizes the situation thus:

> Among the most prominent causes which are being made the subjects of study are: Improper feeding, impure milk supply, overcrowding and bad housing in cities, indifferent and irresponsible parenthood, ignorance and neglect of simple rules of the hygiene and care of infants, and unskilled obstetric care. Some of the means of prevention upon which the association has concentrated attention are the following: Suitable care and protection of expectant mothers, intelligent obstetric service, education of young mothers in all matters relating to the care of infants, by visits of nurses, printed leaflets, familiar talks, etc., encouragement of breast feeding, improved sanitation and housing, regulation of the employment in factories of expectant mothers or mothers with young infants, careful supervision of milk supply, distribution of properly modified milk or clean whole milk for those infants for whom breast feeding is impossible, dissemination of knowledge regarding the spread of infectious diseases, instruction of girls in the public schools and continuation classes in homemaking and the care of infants and young children.

The conference on educational prevention of infant mortality at the 1910 convention and the discussions of continuation schools of homemaking as an agency to this end at the three conventions 1911–13 are of especial concern in this study. The discussions have emphasized the fact that present teaching of homemaking in public schools reaches only part of those needing such instruction, that provision for hygiene and health teaching must be made in continuation schools for girls over 16 years of age and for women, that boys and men as well as girls and women need such instruction. The committee has petitioned the State educational authorities for the establishment of continuation schools, and it very evidently is influencing their development. The Transactions of the Association ($3 each) and the reprints from them of the program on continuation schools (20 cents each) should be consulted by those concerned, respectively, with the whole infant-mortality problem and with the plan for continuation schools of homemaking.

Section 32. COMMITTEE ON PUBLIC-HEALTH EDUCATION AMONG WOMEN.

A committee of the American Medical Association called the "committee on public-health education among women" is promoting better standards of personal, domestic, and public hygiene, by a movement aiming to reach women. Obviously it has much to do with home problems. The committee is pushing an organization with local county representatives; has issued a valuable "List of books on the prevention of disease," and a list of lecture topics (very useful in planning lectures), and is promoting local meetings, lectures, and addresses. The national organization and local representatives aid especially in providing lectures and lecturers for women's clubs, mothers' clubs, farmers' institutes, labor organizations, schools, and wherever in fact this crusade of medical men against ignorance can assist in eradicating disease. In 1911, 300,000 persons were reached through 3,500 public meetings held in 48 States and about 250 counties. The central committee has in preparation a series of leaflets for girls and women "which will be readable and accurate, we hope, without being sensational." Information may be secured of the American Medical Association, Chicago, or from State or local medical societies.

Section 33. NATIONAL HOUSING ASSOCIATION.

The National Housing Association is an organization of persons interested in the improving of housing conditions. It maintains a national office for propaganda work and information service, holds an annual convention, the proceedings of which are the important source of information on housing improvement in America, and publishes various material. The office of the association is 105 East Twenty-second Street, New York.

Section 34. NATIONAL CONSUMERS' LEAGUE.

The National Consumers' League (106 East Nineteenth Street, New York City, and 1800 Prytania Street, New Orleans) is an organization making the influence of the ultimate purchaser or consumer effective in improving industrial conditions; incidentally its efforts tend also to improve the quality of products, so that the interest of home women in this organization is a source of material benefit to themselves, as well as of social benefit. The Consumers' League label on garments indicates that the goods were made in factories in which: (1) The State factory law is obeyed; (2) all the goods are made on premises approved by the league; (3) overtime is not worked; (4) girls under 16 are not employed. The league has State and local organizations, the latter often in schools where they become an agency in emphasizing the consumer's responsibility and housewife's opportunity for social amelioration. The league is working for various industrial reforms—shorter working hours for women and girls, minimum wage laws, child-labor laws, early Christmas shopping, and other improvements in working conditions.

Section 35. NATIONAL CHILD-LABOR COMMITTEE.

The home is fundamentally involved in the child-labor issue; the child thrust into labor to help support a family testifies to that family's economic failure, and probable spiritual failure; the child is taken out of the normal home environment as well as out of the school and his moral as well as intellectual development is turned awry and physical growth is checked; the race as well as the individual is handicapped when he comes to establish a home for the next generation. Adequate teaching for the home must include in its program knowledge of the child-labor menace, and such teaching will aid in the removal of that menace. The National Child-Labor Committee, 105 East Twenty-second Street, New York City, which is leading in the movement for legislative safeguards, furnishes information in its annual reports and in a wide variety of inexpensive pamphlet literature which treats of present conditions, needed legislation, and various special problems. A "Study course on child labor" is issued (25 cents) for individual and club study.

Section 36. CHILD HELPING.

The Child-Helping Department, Russell Sage Foundation, New York, endeavors to secure legislation for the protection of children, improved institutional care of children, reduction of infant mortality, and improved methods in social relief work for children. It publishes bulletins and circulars: Problems of infant morality; The care of the baby; Children's cottage with outdoor sleeping porches: Receiving home for foundlings; The illegitimate child—a life saving problem: The extinction of the defective delinquent, and others.

Section 37. RECREATION FOR THE HOME.

A great movement of to-day is that of providing a wholesome place for recreation in the life of the individual, the family, and the community. Shortened hours of industry, playgrounds, and the recreational use of the school plant in cities, social centers in rural districts, are elements in the program. It is evident that the home is one of the important centers of adjustment, involving such problems as recreation within the home, outside recreation in which the family can share as a group, the cost of recreation in the family budget.

The Playground and Recreation Association of America (1 Madison Avenue, New York City), and the department of recreation of the Russell Sage Foundation (New York City) are national clearing houses for the recreation movement, providing information as to legislation and organization, as well as the more detailed matters of recreational activities themselves, in the form of reports of surveys made, popular bulletins, lantern slides for loan, etc. Thus, the Sage Foundation reports that in 1912–13 social center work was carried on by 71 city boards of education which had opened school buildings and organized evening social activities under paid workers, while 126 other cities had initiated similar activities, but without paid leaders; in 153 schools, "handicraft or domestic science classes not a part of evening school work" were provided. This aspect alone of the recreational movement will bring results for the home; as will its whole program. The Playground and Recreation Association publishes a monthly magazine, The Playground.

Section 38. OTHER ORGANIZATIONS.

Mention may be made of other organizations which are related to the home-betterment movement, the officers of which will furnish information: National Child Welfare Exhibition Committee, 200 Fifth Avenue, New York City[1]; Eugenics Record Office, Cold Spring Harbor, N. Y.; Committee of One Hundred on National Health, 105 East Twenty-second Street, New York; National Association for the Study and Prevention of Tuberculosis, 105 East Twenty-second Street, New York City; American Federation for Sex Hygiene, 105 West Fortieth Street, New York; National Society for Public Health Nursing, 54 East Thirty-fourth Street, New York.

Section 39. THE GENERAL FEDERATION OF WOMEN'S CLUBS AND HOME ECONONICS.

The General Federation of Women's Clubs is an organization uniting the various local women's clubs throughout the United States in a National federation and in State federations. Directly affiliated with the National federation are 1,176 local clubs, and 7,253 local clubs are affiliated with the State federations. The membership of the federated clubs is approximately 750,000. The federation was organized in 1889, and since 1903 one of its important divisions of work has been home economics. The constitution of the federation provides for departments of work in the National organization and in local clubs, as follows:

> Art, civics, civil-service reform, conservation, education, household economics, industrial and social conditions, public health, legislative, literary and library extension, and other departments.

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[1] See bibliography in Bulletin, 1914, No. 39 (Part IV of this report).

The home-economics work of the general federation goes back, however, to 1893, when the National Household Economic Association was formed at Chicago during the Columbian Exposition. Mrs. John Wilkinson, of Chicago, was its first president, and Mrs. Ellen M. Henrotin honorary president. This was a national society, the purpose of which was as follows:

> 1. To awaken the public mind to the importance of establishing bureaus of information where there can be an exchange of wants and needs between employer and employed in every department of home and social life.
>
> 2. To promote among members of the association a more scientific knowledge of the economic value of various foods and fuels, a more intelligent understanding of correct plumbing and drainage in our homes, as well as need for pure water and good light in a sanitarily built house.
>
> 3. To secure skilled labor in every department of our homes, and to organize schools of household science and service.

For 10 years after its organization, in 1893, the National Household Economic Association held meetings and worked with State and local branch associations. Its membership, however, was interested in the General Federation of Women's Clubs, and in 1903 it passed its work over to the general federation.

National federation programs in home economics.—The first report of the federation home-economics committee was made at St. Louis in 1904, when an appeal was made to the federated clubs to assist in securing the introduction of domestic science in the public schools of their communities. This has been one of the important pieces of work in which the federated clubs have interested themselves, although other important items have been added to the home-economics programs at the successive biennial conventions. It is sufficient in this connection, in addition to stating the present program, to cite the national program by Mrs. Olaf N. Guldlin, chairman of the home-economics committee in the general federation, 1910–1912, and taken up under her leadership by the State and local associations, which was as follows:

> To have domestic science taught in the public schools, to have home-economics books put in the city libraries, to have at least one program each year on this subject in each local club, to have one session of the State conventions devoted to this subject, and to cooperate with State agricultural colleges and universities.

A report for 1910 indicated the following status: During the preceding two years 720 clubs held one or more sessions on home economics: 371 clubs had home-economics departments; 278 had regular lectures, demonstrations, or short courses; 257 helped materially in creating sentiment that established home economics in the public schools; and 104 did some kind of philanthropic or educational work in home economics in cities.[1]

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[1] Journal of Home Economics, 3 (1911), p. 334.

The present national home-economics committee, of which Miss Helen Louise Johnson, Watertown, N. Y., is chairman, in 1912 recommended the following program:

> The extension of the scope of home-economics work to include not only household activities, but also the related economic and social studies; the use of the uniform term "home economics" instead of various other generic titles; cooperation in establishing social centers in urban, suburban, and rural communities; assistance for rural women and aid in forming rural clubs; the discouragement of lectures, associations, and exhibits that are commercial rather than educational; the establishment of ideals as to food, clothing, and shelter; cooperation in securing college-entrance credits in home economics.

The general federation committee during the current year has a fourfold aim: The adoption of the home-economics name, propaganda for a uniform food law, securing entrance credits in home economics, and the introduction of compulsory cooking and sewing in elementary schools.

State club programs of home economics.—The State federations of women's clubs in the various States have, in nearly every instance, a home economics committee concerned with encouraging the development of home-economics work in local clubs. Reference may be made to a few State undertakings in this field.

The home economics committee of the Missouri federation, of which Mrs. Charles W. Greene, of Columbia, Mo., is chairman, recently sent the following suggestions to local clubs in the State, with the request that each club undertake some one or more of the lines of work and provide at least one meeting devoted to their consideration:

Study of some special line of home economics, such as household chemistry, bacteriology, house decoration or sanitation, household management.
Study of menus that may be served to a definite number of persons for a definite sum.
Study of dress from an artistic, ethical, scientific, and historical standpoint.
Study of contagious diseases in the home and in the community.
Study of ways and means of improving the mental and physical training of our children.
Teaching of ethics, morals, and religion in the home; origin of life, and sex problems.
Amusement of boys and girls between the ages of 10 and 20 in the home and community—dancing, cards, chaperonage.
The place of music in the home and how to get it there.
Ways and means of saving time and energy in the home.
Study and prevention of infant mortality.
Inspection of groceries, meat markets, and milk depots.
Introduction of home economics into our public schools.
Introduction of home-economics books and journals into public schools and libraries.
Establishing homemakers' conferences.

The cooperation between the Kansas clubs and the State Agricultural College of Kansas, which, through its extension department, furnishes programs of topics, references, etc., on home economics to local women's clubs in the State, is to be commended to other States.[1]

The Kentucky Federation of Women's Clubs brought out in 1912 a bulletin of home economics which provides, in some 60 pages, a treatment of various helpful topics, including: Home economics, household efficiency, farm homes, setting table and serving meals, clearing the table and washing dishes, making beds and cleaning, the kitchen, tables of weights, food values, bread making, recipes, self-raising recipes, laundry work, removing stains, systematic housekeeping, health, care of the sick, sewing, and care of babies. The Kentucky federation has also been successful in organizing local home-economics clubs in many communities, and has cooperated with the State department of agriculture to this end.

The household economics committee of the New Jersey women's clubs maintained for a couple of years an exhibit of household equipment and labor-saving machinery at Colonia, N. J.[2]

A club syllabus on household management and cost of living.—An outline for club study prepared in 1912 by Mrs. F. F. Faville, of Storm Lake, Iowa, chairman of household economics committee, Iowa State Federation of Women's Clubs, is here presented for its suggestions to clubs elsewhere.

The outline is based on "Household management," by B. M. Terrill, American School of Home Economics, and "Cost of living" and "Cost of shelter," by Ellen H. Richards.[3]

MEETING I.

Place of the Home in the Economic World. See "Household Management," chapter 1. The House and what it Signifies in Family Life. "Cost of Shelter," chapter 1.

Round-table discussion.—1. What evolution has taken place in the home in the last 50 years? 2. How far should family cooperation extend in all household affairs? 3. What are the essentials in the establishment of the home? 4. What is true economy? 5. Which is greater, the influence of the home upon the community or the community upon the home?

MEETING II.

Standards of living-"Cost of Living," chapter 1. The House Considered as a Measure of Social Standing—"Cost of Shelter," chapters 2, 3, 4.

Round-table discussion.—1. What influence should neighbors exert as to standards of living? 2. Shall the home maker be bound by the traditions of the past? 3. Should our daughters be educated as home makers? 4. How would you estimate the influence of home environment in character building? 5.

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[1] For description of this plan, see Bulletin, 1914, No. 38 (Part III of this report), p. 97.

[2] See p. 183.

[3] Since this outline was compiled, "The Modern Household," by Marion Talbot and Sophonisba P. Breckenridge, has appeared (Whitcomb & Barrows, $1), which would be especially suitable as an additional basic book for this course.—B. R. A.

What are some of the problems of the home maker in her efforts to make her home attractive, comfortable, happy, and healthful? 6. What is genuine hospitality?

MEETING III.

Household Expenditure—"Cost of Living," chapter 3. Budgets—See "Household Management," page 17.[1]

Round-table discussion.—1. Is there need of more efficiency in spending the family income? 2. Should there be a division of the family income? An allowance? 3. What advantage is there in using a check book? 4. What is meant by "balancing an account"? "Indorsing a check"? 5. Could the average American family live more simply without injury to the health?

MEETING IV.

The cost per person and per family of various grades of shelter—"Cost of Shelter," chapter 6. Operating expenses—fuel, light, wages, etc. "Cost of living," chapter 5, and "Household Management," page 26.

Round-table discussion.—1. Is there need of simplicity in material surroundings? 2. Should we economize in heat at the expense of pure air? 3. Are there leaks in the "domestic treasury"? 4. In what way is it economy to read your own gas and electric meters? 5. How is the efficiency of any business estimated?

MEETING V.

Buying supplies—"Household management," page 97—Kitchen utensils, table and bed linen, carpets and rugs.[2]

Round-table discussion.—1. What is the model kitchen for the twentieth century household? 2. What are some of the new labor-saving household appliances? 3. Does it pay to economize in labor-saving devices? 4. How do you test linen? Silk? 5. Which is the more sanitary, rugs or carpets? 6. Is it ever safe to buy household supplies from agents?

MEETING VI.

Clothing—"Cost of Living," Chapter VII. Clothing—"Household Management," page 36.

Round-table discussion.—1. How far should we follow "fads and fancies" in the matter of dress? 2. What is meant by suitability of materials? 3. What part does care of clothing—darning, mending, pressing, etc.—play in economy of dress? 4. What is your opinion of bargains, real and "fictitious"? 5. Is it always economy to buy the cheapest? What of ready-made clothing? 6. Is there any necessity for a "pure-fabric" law?

MEETING VII.

Food—"Cost of Living," chapter 6.

Round-table discussion.—1. What are some of the causes of the high cost of living? 2. In considering the increased cost of living, what advantage did the pioneer have in the free use of natural products? 3. How may we make the cheaper foods palatable? 4. How are we to know pure foods, and can we assist in any way in raising the standards of food? 5. Does knowing "food values" assist in food economy? 6. Does the use of the telephone in buying food effect the cost of living? 7. What is the relative value of the cash or credit system?

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[1] Leader should request each club member to prepare in advance of lesson, for presentation at this meeting, an ideal budget suited to necessities of locality, based on income of $1,200.

[2] Arrange for an exhibit of modern kitchen utensils.

MEETING VIII.

Marketing—Meats—"Household Management," page 127.

Round-table discussion.—1. Has your community any need for a municipal market? (Dubuque, Iowa, has a successful municipal market. Printed matter may be obtained from commercial clubs.) 2. Are women directly or indirectly responsible for the sanitary condition of the local meat markets? 3. Do you know the "cuts of beef"? 4. How can you tell a young fowl? A fresh fish? 5. What are some "marketing dont's"?

MEETING IX.

Marketing—Vegetables—"Household Management," page 156.

Round-table discussion.—1. Is there any advantage in buying in quantities, or do you prefer one day's "rations" at a time? 2. Is a "cold cellar" for vegetables a necessity? 3. Is canned goods ever cheap food? Name some brands recommended for purity. 4. What does the market offer as substitutes when fresh vegetables are not obtainable? 5. What constitutes a good potato? Name several good varieties.

MEETING X.

Marketing—Milk, butter, and eggs—"Household Management," page 159. Groceries, page 161.

Round-table discussion.—1. Can you assist the local grocers and bakers in keeping the food sanitary; if so, how? 2. Does the more cleanly conditions of the package goods justify the price, as compared with bulk? 3. Are all butter substitutes injurious, and what effect have they on the cost of living? 4. What is value of desiccated eggs and egg powders as substitutes for fresh eggs? 5. Is it any advantage to buy cream only, or milk in larger quantity and have use of skim milk in cooking?

MEETING XI.

Intellectual and emotional life—"Cost of Living," page 89. Higher life—"Household Management," page 37.

Round-table discussion.—1. Do the American people take enough recreation? 2. What forms of recreation are best adapted to the different modes of life? 3. What part should books, travel, music, art, etc., play in the higher life? 4. Is it real economy to neglect all but material wants? 5. Do "artistic surroundings" pay?

MEETING XII.

Experience meeting.—It is suggested that each club member present for comparison the menu for one day's meals for four people, taking into consideration the cost and nutritive value of food materials used.

Round-table discussion.—1. In buying supplies may one be "penny wise and pound foolish"? 2. What do you know of the use and abuse of preservatives? 3. Does it pay to patronize mail-order houses? 4. Could you save one-tenth of your household expense if you were a more careful buyer? 5. Is your housework drudgery; if so, why? 6. Is there such a thing as a "superlatively well-kept" house?

REFERENCE BOOKS FOR USE, IF DESIRED, IN SUPPLEMENTARY READING.

Richards, E. H. Art of Right Living.
——— Euthenics—the Science of Controllable Environment.
Hunt, C. L. Home Problems from a New Standpoint.
Richardson, B. J. The Woman Who Spends.
Hard, William. The Woman of To-morrow.

Home economics programs in local clubs.—Programs of 58 clubs in 11 different States were recently examined critically by Ellen Rushmore McKeown to see what clubs are doing for home betterment. Mrs. McKeown concluded that the clubs fall into three general groups: Those with a large membership, 300 to 500 or more, situated in the largest cities; medium-sized clubs, from 50 to 100 membership; and small clubs, with a membership of 25 to 50, usually located in the smaller towns, although occasionally in cities. The programs of the smaller clubs are conspicuous for their study of cultural topics. Occasionally these clubs devote an entire night's program to some single subject. Occasionally the smaller clubs have a domestic-science section, although often a single meeting a year devoted to this topic comprises their activities. The medium-sized club attempts more definite work in home economics, usually devoting from one to four meetings a year and bringing in outside speakers from agricultural colleges and other centers of education. Club members also present papers and give demonstrations. The best work in home economics, as in other fields of club work, seems to be done by the largest clubs. A striking example is the Worcester, Mass., women's club, with a membership of over 600. This club has a department of home economics and a standing committee on pure food. In a single year it provided the following lectures: Housing, from tent to tenement; Shopping; Textiles; Clothing as purchased today; Hand versus machine-made garments; Wearing apparel; The women's day and how to meet it; The home problem and civilization. The lectures were given by visiting instructors from various educational institutions. The clubs in larger cities commonly have programs of civic and community betterment which cover the whole field of social problems.

The Present Day Club, of Princeton, N. J., a year ago carried out the following home-economics program. Six lectures on household economics given by Miss Helen Louise Johnson on the following topics: The house. The servants of the house. The buying for the house. The household budget. The man of the house, and The children.

Following the lectures, six practical lessons were given on the following problems: The cleaning of the house, including labor-saving devices. The laundry, including equipment and the question of public laundry versus home laundry. The marketing. A dietary for the children. Dietary for the adults. "How to live on twenty-four hours a day."

A course of reading was suggested with the program and a traveling library was secured.

An interesting club program which many clubs have followed is to consider the work and life of the home as it may be scheduled day by day throughout the week and make each day's schedule a matter of discussion in the club, so that on "Sunday's program" papers have been presented on the modern significance of the day, on the use of the fireless cooker and other plans to reduce labor, the place of the church and religion in the family life, the utilization of Sunday afternoon and its opportunities in connection with parents and children. So in turn the problems of "wash day," "baking day," and other days of the week have been presented.

Clubs which have not had home-economics departments have in many cases carried on civic and municipal work of real significance for the home. As one club reports—

> home economics has not been taken up yet, due to the fact that we had other work which seemed to us more important, namely, civic and betterment affairs for the whole community. We first investigated the problem of a new water supply, and secured favorable community action. Next, the city gave us permission to establish a city house-cleaning day. Next, we were instrumental in organizing an associated charities. This year our work has included the organization of a night school, which provides among other things for instruction in domestic science and domestic art for working girls. We have secured a grand stand in our park for summer music, playgrounds for the children, and are constantly on the alert, and are always ready to do all in our power to make this city as much our home as the four walls we occupy.

Facts on club work in home economics.—A schedule of inquiry was sent to the local clubs belonging to the State and National federations of women's clubs asking information on their home-economics activities. Schedules were returned by 749 clubs, and of these, 616 clubs reported that they were actively interested in home economics.

Method of study in home economics.—Of 749 clubs replying and of 616 clubs actively interested in home economics, 171 report the use of textbooks in home-economics study; 274, the employment of outside lecturers; 425, papers on household subjects by club members; and 120 clubs report that they have held conferences on household problems. Of these methods, that of self-help in programs contributed by club members is by far the most common.

Home-economics subjects in club programs.—The following subjects were reported as considered on club programs by the number of clubs indicated. The numbers are to be compared with a total of 749 clubs replying and of 616 clubs actively interested in home economics: Food materials, 433; food preparation, 343; household management, 342; relation of home to community, 291; care of children, 282; care of sick, 211; housing, 164; service, 141; textiles, 135; sewing, 129; other subjects, 59.

Social welfare and improvement.—The question was asked whether the clubs had conducted "settlement or philanthropic work of any kind related to home betterment," and 228 clubs reported in the affirmative. There were 56 clubs which served free or inexpensive lunches to the children of local schools; 50 have established school lunchrooms or aided the board of education in so doing; 164 clubs have placed home-economics books in the local public libraries; 199 clubs report knowledge of some form of traveling libraries of home economics, with actual use by 73 clubs; and 220 clubs report additional lectures and conferences on home subjects in addition to their programs of study referred to above.

The economic and sanitary improvement of markets and the sanitary control of the food supply are matters with regard to which women's clubs are in a position to act intelligently and effectively. As a matter of fact, the federated clubs are acknowledged to have been instrumental in securing the enactment of the Federal pure food and drugs act of 1906. The local clubs were asked as to their activities in regard to this problem, and replied as follows: One hundred and seventeen clubs had studied the local market situation, 58 had sought the establishment of public markets, 270 had worked for clean markets or inspected markets, 308 had worked for the adoption or enforcement of pure food and drugs laws, and 102 had interested themselves in the problem of correct weights and measures.

Sanitary housing is fundamental to improved housekeeping, and women's clubs have sought to improve housing conditions in not less than 185 cases either by a survey or field study of housing conditions or by working for better official regulation of housing construction and use.

Clubs and the public schools.—Women's clubs have always shown great interest in the public schools, in no way more perhaps than in securing the introduction of domestic science into the school curricula, and local clubs are still working with the schools to this end. Women's clubs have in some cases provided the equipment necessary for domestic-science teaching and the salary of the experimental teacher until the work is established. A striking instance of club cooperation is that of the club women of Crete, Nebr., who have themselves taught domestic science for a number of years to public-school children, who come to their homes at stated times. Of 371 clubs reporting that such instruction had been introduced into the local public schools and of 261 clubs reporting courses in the local high schools the clubs themselves had helped to secure the introduction in 173 communities. Evening courses in household arts given by the schools are reported by 91 clubs.

Clubs and legislation.—The women's clubs have always interested themselves in supporting desirable social legislation, and committees on legislation are provided by local clubs and by the State and National federated organizations. The clubs have assisted materially in supporting pure-food legislation, both Federal and State. A question was asked as to whether local clubs had considered the proposed Federal legislation for "pure textiles" and for national grants for home economics and agricultural education; 87 of the local clubs had considered the textile bills and 36 clubs report that they have studied the proposed Federal legislation granting aid to home economics and agricultural education.

College extension teaching of home economics and women's clubs.—The extension work in home economics of the State colleges and universities has frequently sought the cooperation of local women's clubs. A report of this extension activity from the standpoint of the clubs throws some light on the success of the cooperation: One hundred and seventy-seven clubs report that aid of some kind in the field of home economics has been extended to them by the State institutions; 57 clubs report extension courses in home economics in their communities under the direction of the college; 103 report stops by railroad demonstration trains, with lectures and exhibits; 105 clubs report that one or more of their members have attended the household conferences or short schools at the college itself; 126 clubs report that they have received home-economics bulletins and publications from the State institutions; 66 clubs have received outlines for study; and 19 clubs report that they have had correspondence courses.

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SIMMONS COLLEGE, BOSTON, MASS.

Demonstration of cuts of meat in marketing.

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EDUCATION FOR THE HOME

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PART III

COLLEGES AND UNIVERSITIES

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PREFATORY NOTE.

Over 250 colleges now offer courses of instruction that have direct reference to the home; and related applied-science courses in economics, sociology, biology, bacteriology, and chemistry are given in over 40 other institutions.

In this portion of the report there are presented statements showing how instruction in home economics is organized in various colleges and universities, such as the University of Chicago, with its department of household administration as a division of the university, and in addition in its school of education a department of home economics and household arts; the University of Missouri, with its department of home economics a part of its school of education, but offering work also for the degrees of A. B. and B. S. in agriculture; Elmira College, one of the early women's colleges, which now offers a vocational degree in the household field and accepts certain courses for the A. B. degree; the University of Wisconsin, in which the department is administratively related to the college of agriculture; Simmons College, Boston, an academic-vocational college with household economics as one of its six vocational departments; Teachers College, Columbia University, which not only trains teachers of household arts, but in its technical "school of practical arts" trains household and institution managers, dietitians, and similar professional workers related to the household. The college course in home economics recommended by a committee of the agricultural colleges is also presented.

Outlines of typical individual courses, as given in different colleges and universities, are next presented under the following groupings: The home-economics movement; economic and social-science courses related to the household; natural science courses related to the household; courses in foods; courses in clothing, shelter, household management, and related courses. There are further presented (p. 62) data regarding college instruction in household arts received through a schedule of inquiry. The facts are assembled first by individual colleges (table 1, p. 63); they are then discussed as to the conclusions, with explanatory illustrations, under such headings as the dates of introducing college instruction, degrees, courses, registration, summer courses, extension education, equipment, and other subjects.

EDUCATION FOR THE HOME—PART III.

I. TYPICAL COLLEGE CURRICULA IN EDUCATION FOR THE HOME.

Section 1. UNIVERSITY OF CHICAGO.

The University of Chicago offers work related to the home at two points in the university: The department of household administration, in the faculties of arts, literature, and science; and the department of home economics and household arts in the school of education.

The department of household administration of the University of Chicago is significant as a university department of instruction which offers undergraduate and graduate instruction under the faculties of arts, literature, and science. Its courses particularly emphasize the administration of the home, and its sanitary, economic, legal, and community problems. Household administration is here given fullest academic recognition and placed coordinately with the long-established academic and scientific departments. The courses have been from the first in charge of Miss Marion Talbot, professor of household administration, and dean of women, with whom there is associated Miss Sophonisba P. Breckinridge, assistant professor of social economy. The very statement of the purpose of the courses presents a liberal view appropriate to university relationships:

> The courses in this department are planned to give students (1) a general view of the place of the household in society as a means of liberal culture; (2) training in the rational and scientific administration of the home as a social unit; (3) preparation to serve as teachers of home economics, domestic science, and household arts, or as social workers in institutions whose activity is largely expressed through household administration. The regular courses of the department are supplemented by courses offered by instructors in other departments, especially in the departments of sociology, chemistry, zoology, physiology and bacteriology, and of the school of education.
>
> The department grants no special certificate; its work is applied, like that of other departments, toward the requirements for the various university degrees—bachelors of arts, science, and philosophy; the master of arts and of science and the doctor of philosophy and of science. Undergraduate students may take their "major or minor sequence" in this department or choose electives; college of

education students who are candidates for the bachelor's degree in education or the two-year certificate in home economics may elect work in the department of household administration; unclassified students who are 21 years of age and high-school graduates with training in either physics or chemistry may pursue courses independent of a degree; and instruction in certain courses is offered through the correspondence-study department of the university. The department affords "opportunities for gaining practical experience in housekeeping, lunch-room management, marketing, household accounting, and similar activities. There are also frequent occasions for active participation in such philanthropic work as supplements the instruction of the classroom."

The following courses of instruction are offered by the department of household administration:

The Organization of the Retail Markets.—An elementary course intended to familiarize the student with the machinery of trade with which the householder comes into direct contact. Visits will be made to typical distributive establishments.

The Consumption of Wealth.—Standards of living; necessaries for life and for efficiency, comforts, luxury, and extravagance; a minimum wage and a living wage; saving and spending; organized efforts among consumers to control production.

The Economic Basis of the Family.

Public Aspects of the Household.—A course intended to review the relations between the householder and the public, as represented by Federal, State, or municipal authority.

Legal and Economic Position of Women.—A study of the status of women with reference to their property, the effect of marriage, their share in the control of their children, their opportunities as wage earners and producers. (See p. 22.)

The Child and the State.

Problems in Household Administration.—This course will be conducted for students who have had special training and experience, preferably in teaching, social work, or scientific housekeeping.

House Sanitation.—This course deals with the house as a factor in health. Special attention will be given to modern conceptions of cleanliness and to the investigation of general sanitary conditions from a practical and scientific standpoint and with special reference to the needs of the community, the household, and the school.

Food Supplies and Dietaries.—The nutritive and money values of foodstuffs; the application of heat to food principles; adulterations; methods of preservation; sanitary and economic aspects of food; popular misconceptions as to foods.

Administration of the House.—This course will consider the order and administration of the house with a view to the proper apportionment of the income and the maintenance of suitable standards. It will include a discussion of the domestic-service problem.

Modern Problems in Household Administration.—The work will be conducted only for students capable of carrying on independent investigations. It will deal with new and unsettled problems whose solution will help place the subject of household administration on a more secure scientific basis.

Special Research.—Open only to students who have had special training and experience.

Department of home economics and household arts.—The school of education, University of Chicago, offers courses in this department which are planned for those students who are preparing to become teachers or supervisors in elementary and secondary schools in home economics and household art, and for teachers of these subjects in normal schools and colleges; also, courses in institution economics. Students registering in this department must take physiology, chemistry, and economics in addition to the general requirements. This department offers two curricula, one leading to the bachelor's degree in education, and the other to a departmental certificate conferred on the completion of 18 major courses of required work. The courses offered include:

In Home Economics.—Food and its preparation (2 courses), application of heat to food materials (4 courses), study of foods (2 courses), dietary problems, dietetics and dietary standards, chemistry of foods (2 courses), home sanitation, institution economics (3 courses), theory of teaching home economics, and practice teaching.

In Household Art.—Economics of household art, house planning and construction, handwork of household art, textiles, sewing (3 courses), dressmaking, millinery, drafting, constructive design in costume, theory of teaching household art, practice teaching.

Institution economics.—Miss Cora C. Colburn, of the school of education of the University of Chicago, furnishes the following statement of the courses in institution economics:

The instruction is given in the senior college, and all students who wish to specialize in this particular field are expected to meet the full requirements of the department of home economics. The several dining halls of the university are used as working laboratories by the students in this department, and every possible opportunity is given for experience in this line of work.

An outline of the courses follows:

Course 1. A study of the organization and equipment of school lunch rooms, public and private institutions; the installation of equipment, with reference to the economy of time and energy; lecture and field work.

Course 2. Production, manufacture, and distribution of foods; their commercial and nutritive value; storage and care of supplies; lecture and laboratory; to accompany or precede course 1.

Course 3. The preparation and selection of food; a study of institution dietaries with special reference to the school lunch; quantity in relation to number to be served; methods of serving.

Section 2. UNIVERSITY OF MISSOURI.

The various departmental relations of a home economics department are well illustrated by the courses at the University of Missouri, where the department of home economics is a part of the school of education, but with other important affiliations:

For A. B. degree: Students may include in their elective requirements for the bachelor of arts degree, not to exceed 15 hours, from the following household science courses—Introduction to home economics, 5 hours; house sanitation, 3; house decoration, 2; foods, general course, 4; metabolism and dietetics, 3.

For the degree of bachelor of science in education, with home economics as a special subject, there are required (after two preliminary years in the college of arts and science where work is had in experimental psychology and educational psychology) courses in the history of education, theory of teaching, practice teaching, and school economy, with a minimum requirement of 17 hours in home economics, including a course in the teaching of home economics.

For the degree of bachelor of science in agriculture: A four-year curriculum in agriculture for women is offered, with 58 hours required as below, 36 additional hours required in either the plant group, dairy husbandry group, or the home economics group of courses, and the balance of 26 in the total of 120 hours as free electives. The required subjects are as follows: *Freshmen year*—chemistry, inorganic (5) and analytical (5); English (5); horticulture-plant propagation (2), introduction to home economics (5), general botany (5). *Sophomore year*—elementary organic chemistry (3), grain judging (3), landscape gardening (4), English (4), general bacteriology (3), elements of dairying (3). *Junior year*—house sanitation (3), general zoology (5).

For these three curricula the home economics department offers the following courses: Introduction to home economics (5 hours), dietetics for nurses (2), textiles and clothing (2), sewing (2), advanced sewing (2), millinery (2), house sanitation (3), house decoration (2), foods—general course (4), metabolism and dietetics (3), dressmaking (3), principles of nursing in the home (1), and research.

Section 3. ELMIRA COLLEGE.

Elmira College, established at Elmira, N. Y., in 1855, offers a program in domestic arts and science leading to the bachelor of science degree (vocational). Another "vocational" course is offered in secretarial work and social science. These "vocational" courses are in addition to the classical course leading to the A. B. degree, and a music course leading to the B. S. degree. Graduates of colleges may take a one-year course in secretarial or social work. The domestic arts course is intended to prepare teachers and fit for household management. Fifteen units of high-school work are required for admission, including two units in natural science, chemistry, and physics. The following courses are offered: Household economics, six courses in foods and cookery, including a course in the theory of teaching domestic science, two courses in hygiene (one in laundering), five courses in clothing, including one in the theory of teaching domestic art. Of these courses those in nutrition, food chemistry, and theory of teaching may be taken with credit by candidates for the nonvocational degrees. The college offers also 12 courses in business as part of its vocational curricula, which include standards of living and administration of the income, commercial and household accounts, and other commercial and philanthropic studies. As Elmira College was among the earliest of the women's colleges, so it is the first of the eastern women's colleges to provide vocational curricula both for undergraduates and graduates.

Section 4. UNIVERSITY OF WISCONSIN.

The department of home economics of the college of agriculture, University of Wisconsin, Madison, offers a four-year general course leading to the degree of bachelor of science. A minimum of 36 to 40 credits in home economics is required for the degree in this field. The curriculum is announced as dealing "with the principles which underlie the proper management of the home, care of children, hygienic and sanitary conduct of institutions, and the economic conditions affecting the work of women," and is intended for four types of students—those desiring a general knowledge of the subject as part of a liberal education, those interested in the management of the home, those wishing to teach in secondary schools and higher institutions, and graduate students.

The subjects required for the various years of the curriculum, and the credits allowed for each are as follows:

First year.—English, 6; German or French, 8; chemistry, general and qualitative analysis, 10; home economics, art and design, including principles of design, color and its application in the home, 3; home economics, selection and preparation of food (prerequisite, entrance, physics, or chemistry), 3.

Second year.—Physics, general, 10; household chemistry, composition and physical properties of food, nutritive values, chemistry, and home, 5; physiology, human anatomy and physiology, 3; bacteriology, as concerned with water, milk, and other food supplies and materials to be found in the household, 5; home economics—textiles, historical, economic, chemical, and hygienic aspects, microscopic tests, laundry problems, 4; electives, 2, 3.

Third year.—Home economics—manufacture and selection of clothing (prerequisite art and design, and textiles), history of costume, costume designing, comparison of home and factory-made clothing, hygienic factors, economic and social aspects of clothing industry, 6; home economics—house architecture and sanitation (prerequisites, chemistry, physics, bacteriology, art and design), 5; home economics—economic problems of the food supply, costs of production, and sale, processes of manufacture, food laws and inspection, testing of apparatus, 3; home economics—household decoration, floor coverings, hangings, pictures, economic problems in furnishing (prerequisites, art and design, textiles, and house architecture and sanitation), 4; home economics—dietetics (prerequisites, selection and preparation of food, food supply, physiology, bacteriology, chemistry, household chemistry), dietary standards, balanced rations, diet as influenced by age, sex, and occupation, construction of dietaries, and service of meals, dietetic treatment in disease and principles of home nursing, 5; electives, 8.

Fourth year.—Home economics—household management (prerequisite chemistry, bacteriology, physics, art and design, selection and preparation of food, food supply, textiles, dietetics, house architecture, sanitation, and decoration), 3; home economics—humanics, development from before infancy to adolescence, problems of hygiene, mental development and habit formation, 4; home economics seminar, problems connected with the home, institutional management and the home economics movement in education, 1; home economics—teachers' course, existing courses in home economics, planning courses and equipment, observation and practice work in presentation, 2; thesis, 2 points; electives, 16.

In addition to these courses, which are required for the degree, the home economics department offers an introductory "general survey" course, the first half devoted to food problems, the second half to the house plan, first aids, cost of living, etc., also a senior and graduate course in institutional management, and a seminar on housing problems. The following electives given in other departments of the university are especially recommended:

English literature, biology, qualitative, organic, and agricultural chemistry, economics, economic statistics, social psychology, poverty and relief, educational psychology, experimental psychology, history, floriculture, economic entomology, and zoology.

Section 5. SIMMONS COLLEGE, BOSTON—AN ACADEMIC-VOCATIONAL COLLEGE.

Simmons College, Boston, opened 1902, "to furnish to women instruction and training in such branches of art, science, and industry as may be serviceable in enabling them to acquire a livelihood," offers a combined technical and academic curriculum with special programs in six distinct vocational fields—household economics, secretarial studies, library science, general science, social work, and industrial teaching. This college, therefore, combines technical and academic study for women somewhat as our best schools of technology do in training for engineering professions. Standard four-year programs are offered for high-school graduates and one-year and two-year programs for those who have had collegiate training elsewhere. In household economics the courses prepare for teaching household arts, for directing such instruction, for administering the institutional and private household, and for undertaking research in dietetics or other problems of household economics. The programs include science, applied science, and practice in household arts with elective studies.

The four-year program in household economics leads to the degree of bachelor of science. The first year, common to all courses, requires inorganic chemistry, English, history, household management, physics, and physical training. After the first year three specialized programs are offered:

Group I. This program emphasizes the scientific study of foods and their preparation, with full courses in chemistry and biology through four years in preparation for teaching, administration, or research in fields requiring knowledge of food, sanitation, and the practical household arts. It requires: Second year—Biology, physiology, or anatomy and histology, organic chemistry, cookery, English, housebuilding, and sewing. Third year—Bacteriology, quantitative analysis, chemistry of foods, cookery, economics, English, hygiene, marketing, and sanitary science. Fourth year—Psychology, ethics, and sociology, dietetics, foods, household economics, with electives in the last two years.

Group II. This prepares general teachers of cooking and sewing, with a minimum requirement in science, and including sewing and design, for those who do not desire to specialize either in "domestic science" or "domestic art." It requires in the first year the uniform program; in the second year a program like that of Group I, except that a special chemistry course is provided, which completes the chemistry study required of this group; in the third year the program is like that of Group I, except that chemistry is omitted and sewing and design required; in the fourth year the few subjects required in Group I are also required here, but elective courses may emphasize sewing and design.

Group III. This prepares for teaching textiles, sewing, and design—that is, "domestic art." In the first year the uniform program is required; in the second and third years the program substitutes for the advanced chemistry and cookery of Group I work in sewing and design; in the fourth year the program includes psychology, ethics, and sociology, household economics, education, dressmaking, textiles, costume design, elementary-school sewing or industrial sewing, and organization of sewing courses.

The department of household economics offers two two-year programs for college graduates leading to the B. S. degree, one for those who have not studied chemistry, the other for those who have. Such students may also enter for a single year's technical study without reference to the degree.

Two special one-year programs are also offered, as follows:

1. In household management, offering preparation for the intelligent administration of the private household, requiring the following courses (substitutions allowed to meet individual needs): Bacteriology, chemistry, cookery, household management, marketing, physiology, child life, sanitary science, sewing, and physical training.
2. In institutional management, which is open to persons of maturity or experience, with the equivalent of a full high-school course, in preparation for care of college dormitories, tea rooms, or public institutions. Students must live in the college dormitories, and opportunity is provided for observation and practice in the lunchrooms at the Women's Educational and Industrial Union. The required courses are: Administration, bacteriology, chemistry, cookery, dietetics, household management, household sanitation, institutional management, with practice in the college dining hall, laundering, marketing, physiology, and sanitary science.

The department of household economics also offers one-year and two-year programs in household arts for teachers of experience, and a one-term program for students in training schools for nurses; also partial programs for students wishing to enter single technical courses, and extension courses for teachers of sewing.

Section 6. TEACHERS COLLEGE, COLUMBIA UNIVERSITY.

Teachers College comprises two schools, the school of education (a graduate school since July 1, 1914) and an undergraduate school of practical arts. As regards household arts there are two end points in the instruction offered—the training of teachers and the preparation of technical experts in household management, dietetics, and other vocational fields.

I. TRAINING OF TEACHERS IN THE HOUSEHOLD ARTS.

General aim.—The general aim is to prepare teachers of the household arts for both the elementary and secondary schools. The tendency is, however, to concentrate on the development of courses of training for normal-school teachers, supervisors of city systems, instructors in the college and university, and supervisors or heads of departments in college and university.

Admission requirements and length of course.—(*A*) For the master's degree in household arts education the general admission requirement is graduation from an accepted college with either the degree of A. B. or B. S. The special requirement for this department is strong foundation work in chemistry, which will enable the student to enter the advanced courses, and a knowledge of the undergraduate courses in the other technical subjects. A student who does not fulfill all these requirements may be entered as an unclassified student, taking necessary undergraduate technical work. The length of the time, whether one year or two, depends, of course, upon the previous training of the student.

(*B*) For the B. S. degree graduation from a standard high school is accepted for admission, and previous work in science and the household arts is desirable. The full course is four years, leading to the B. S. in education. Advanced students are admitted to the department of household arts education in the junior or senior year (the length of time depending upon the previous training of the student), the freshman and sophomore years of the course having been taken elsewhere.

(*C*) A certificate is awarded to teachers of experience who have had normal-school training when they have proved their ability to do high-grade work in the household arts education subjects.

Subjects.—(*A*) *Courses in education.* The foundation courses are educational psychology and history of education, and the course in principles of teaching in which the problems in household arts and industrial education are stressed. These courses are followed and paralleled by courses in special methods in household arts education, which deal with the problems of the elementary and secondary field. The most elementary course deals with the problems and methods in the elementary and high school. A second course deals with these two fields from the point of view of supervision, the students assigned to this class being those who are already experienced in teaching household arts. In the practicum for graduate students, large topics for special investigation are assigned to individual students. A course in methods of teaching in the college is given by several members of the household arts staff, the question of the content of each course and methods of presentation being treated in detail.

(*B*) *Technical subjects.* These include foundation courses in elementary chemistry, physics, and biology, followed by specialized courses in physiological chemistry and nutrition for students specializing in foods and sanitation. For the students in textiles there are corresponding courses dealing with the chemistry and manufacture of textiles, and with these may be grouped foundation courses in design. The technical courses of a practical nature include cooking and serving, marketing, housewifery, laundering, sewing, dressmaking, millinery, house structure, house and city sanitation, home nursing, care of children, and household management.

(*C*) *Courses in sociology and economics.* While these are so far used as electives, they are, in a sense, required electives. The trend of events points to the inclusion of courses of this nature among the required subjects. The courses offered include elements of economics, household economics (undergraduate and graduate), history of the family as a social institution, the basis of social legislation, and social evolution.

(*D*) The grouping of subjects.—There are various groupings of the listed subjects in order that the various needs of the field may be met, and that the students, while having certain foundation subjects, may have a wide range of choice. The undergraduate groups are given below, and to each group are to be added the fundamental courses in educational history, psychology, and educational methods as stated above under (A):

Group I. Clothing, textiles, household furnishings, and management in the elementary school: Teaching of household arts, 5 points; textiles, 4; elementary clothing, 4; drafting and pattern making, 3; dressmaking, 4; millinery, 3; household art design, 3; elementary costume design, 3; principles of home decoration, 3; and any two of the following—housewifery, 2; domestic laundering, 2; household economics, 2; costume design, 3; dressmaking (intermediate), 4; teaching industrial arts, 4.

Group II. Clothing, textiles, household furnishings, and management in the secondary school: Teaching of household arts, 5 points; textiles, 4; elementary clothing, 4; drafting and pattern making, 3; dressmaking, 4; dressmaking (intermediate), 4; millinery, 3; history of costume, 2; household art design, 3; elementary costume design, 3; advanced costume design, 3; and any two of the following—domestic laundering, 2; household economics, 2; household management, 2; principles of home decoration, 3; millinery (advanced), 4; dressmaking (advanced), 3.

Group III. Foods, nutrition, and sanitation in elementary schools: Teaching of household arts, 5; food and nutrition, 4; food production, 3; household chemistry, 4; technology of cookery, 4; elementary food preparation, 3; home cookery and table service, 4; housewifery, 2; and any three of the following—domestic laundering, 2; household economics, 2; household management, 2; home nursing, 2; physical science in the household, 2; principles of home decoration, 3.

Group IV. Foods, nutrition, and sanitation in the secondary school: Teaching of household arts, 5 points; food production, 3; household chemistry, 4; physiological chemistry, 4; dietetics, 4; technology of cookery, 4; elementary food preparation, 3; home cookery and table service, 4; elementary microbiology, 2; and any two of the following—housewifery, 2; domestic laundering, 2; household economics, 2; household management, 2; home nursing, 2; physical science in the household, 2; principles of home decoration, 3.

Group V. Clothing, textiles, foods, nutrition, and household management in the elementary school: Teaching of household arts, 5 points; textiles, 4; elementary clothing and handwork, 4; drafting, draping, and pattern making, 3; dressmaking (elementary), 4; household art design, 3; principles of home decoration, 3; costume design, 3; housewifery, 2; food and nutrition, 4; food production, 3; household chemistry, 4; technology of cookery, 4; elementary food preparation, 3; home cookery and table service, 4.

Students who can obtain exemption from these subjects are free to select other education courses and to pass on to advanced work in their special field. A student who has advanced standing, but who is not a college graduate and therefore can not work for her master's degree, is nevertheless enabled to do strong work of graduate standard.

II. ADMINISTRATION COURSES AT TEACHERS COLLEGE.

The school of practical arts, Teachers College, Columbia University, offers a four-year combined academic and technical course with an opportunity to specialize in preparation for various vocations, including in household administration the management of the private home, the administration of the institution, the administration of the hospital, and dietary administration. Other vocational courses in household arts are given in foods and cookery, textiles and clothing, house decoration, and costume design. The requirement in each of the practical-arts fields is a four-year course with approximately one-third of the time devoted to required academic subjects, one-third to required technical subjects, and the balance devoted to electives. The academic requirements are: Two years of English, and a year each of a modern language and history, with additional academic requirements or electives to make up one-third of the curriculum. The additional technical requirements are specialized for the various administrative fields, as follows:

In household administration: Housewifery, domestic laundering, the history of the family, house structure, household economics, household management, marketing, food economics, physics, technology of cookery, elementary clothing, textiles, home nursing, care of infants and small children, municipal sanitation, household chemistry, art appreciation, home furnishings.

Institution administration: Housewifery, domestic laundering, history of the family, house structure, institution administration, accounting and office management, social legislation, food production, household chemistry, technology of cookery, home cookery, institution cookery, food economics, municipal sanitation.

Dietary administration: Housewifery, house structure, dietary administration, institution administration, accounting and office management, technology of cookery, home cookery, institution cookery, catering, food production, household

A. WOMAN'S BUILDING, DEPARTMENT OF HOUSEHOLD SCIENCE, UNIVERSITY OF ILLINOIS, URBANA, ILL.

B. HOME ECONOMICS BUILDING AT IOWA STATE COLLEGE, AMES, IOWA.

A. PRACTICE COTTAGE, WINTHROP COLLEGE, ROCK HILL, S. C.

B. DINING ROOM IN NEWCOMB COLLEGE, TULANE UNIVERSITY, NEW ORLEANS, LA.

chemistry, physiological chemistry, municipal sanitation, dietetics, nutrition, and food economics.

Hospital administration: Institution laundering, house structure, dietary administration, hospital organization and administration, accounting and office management, social legislation, municipal sanitation.

The completion of the four-year course is marked by the degree of bachelor of science. Technical certificates are granted in these four fields to mature students of approved qualifications who are unable to complete the full work for the degree, but who fulfill with high standing the technical requirements set forth by the department. Such requirements may usually be covered in two full years of work.

Section 7. COLLEGE COURSE RECOMMENDED BY THE ASSOCIATION OF AGRICULTURAL COLLEGES.[1]

A committee of the association of agricultural colleges and experiment stations recently recommended a college course in home economics to follow two years of home economics in high school, for which college credit should be given. The college study should include the theory of the subject, especially the scientific principles involved, and should give a rational basis for an efficient practice. The general scheme of instruction should involve, according to the report—

> (1) The presentation of the subject in concrete form, with accompanying practice; (2) the development of the principles involved, with laboratory practice; and (3) the application of these principles in a rational system of practice more advanced in type, with opportunities for devising new methods of practice and for experimental work. The required subjects would be: 1, home architecture and sanitation; 2, home decoration; 3, textiles; 4, selection and preparation of food; 5, economic uses of food; 6, household management. The student must select one elective from advanced cooking, dressmaking, or millinery, art needlework, and one from dietetics, food and nutrition, art in the home.

For students who have not had instruction in home economics in preparatory schools a minor college course is suggested. Students in either home economics course are to take also such work in mathematics, language, science, economics, sociology, principles of education, etc., as will make their whole college course a well-rounded scheme of liberal education, comparable with the degree courses in other lines, and at the same time contribute to the thoroughness of their work in home economics.

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[1] See articles of A. C. True in Journal of Home Economics, 2 (1910), 243, and 3 (1911), 421.

II. OUTLINES OF INDIVIDUAL COLLEGE COURSES.

There are presented herewith outlines of various courses in home economics offered in different colleges and universities in a belief that in this way, better than in any other, an idea of the nature of the home-economics field and the way it is approached in courses of instruction can be given. The courses are not offered as models for imitation but as suggestions of typical practice. With the exception of the subject of foods and nutrition, it has not been thought advisable to present parallel courses in different institutions. Instruction in this subject is older than any other, and a comparison of collegiate courses may prove helpful. It is believed that instructors in elementary and secondary schools will find these outlines of collegiate courses of distinct help in organizing their own instruction. In any new subject the allotment of subject matter to schools of various grades must be a matter of development. What is originally thought advanced and proper for the college may ultimately find its place in the high school. On the other hand, the high school may attempt work which later will be found to belong more appropriately to the college.

Section 1. THE HOME-ECONOMICS MOVEMENT, UNIVERSITY OF ILLINOIS.

Prof. Isabel Bevier, of the University of Illinois, contributes the following statement:

The course on "The home-economics movement" aims to make the student intelligent concerning the origin, development, and present status of home economics. In the accomplishment of this aim the following topics are considered: The education of women, the development of industrial education, the Fellenburg movement, manual-training movement, coeducation, the technical schools, land-grant colleges, and vocational education. The student thus gains information about these various movements and an appreciation of their contribution to the development of home economics. The sources of information are educational and industrial history in general, with special reference to and emphasis upon these particular topics. The reports of the Lake Placid conference on home economics, the Journal of Home Economics, and the reports of the National Education Association give the more specific work of organized home economics. The writings of Dexter, Thwing, Bagley, Snedden, and others are consulted for special phases of education. Study of current literature and the catalogues of the institutions offering work in home economics aid in an understanding of the present-day point of view. "The Home-Economics Movement," by Bevier and Usher, is also used. The following references give some idea of the use made of current literature in the course:

Fellenburg Movement in the United States, Boone's Education in the United States, p. 223.
Early Phase of Manual Training Movement, Pedagogical Seminar, vol. 5, p. 287.
Girls' Colonial Schools, Education, vol. 22, p. 532.
Place of Manual Arts in Education, Educational Review, Oct., 1911.
Are We an Inventive People in the Field of Education, Science, Aug. 9, 1907.
A Change of Educational Emphasis, Birge, Atlantic, vol. 103, p. 189.
The College Woman Graduate, Education, June, 1907.
Present Tendencies in Women's Colleges and Universities, Educational Review, vol. 35, p. 64.
The College and the Household Sciences, Munsterberg, Good Housekeeping, Jan., 1913.

There is little lecture work; the bulk of the course is made up of reports and discussion by the student, and, finally, an outline made by the student showing what seem to her the most important factors in the development of the subject. By this study the student acquires an insight into the numerous factors that have contributed to the development of the group of subjects known as home economics, as well as an appreciation of the relation of home economics to education and to life and the basis and breadth of view necessary for worthy work in it.

The course is given one hour a week for one semester, open to seniors and required of those who expect to teach home economics. The course is also of value to the supervisor of other courses because it shows the possible and profitable correlation of home economics with other subjects.

Section 2. COLLEGE COURSES IN ECONOMIC AND SOCIAL SCIENCE RELATED TO THE HOME.[1]

THE HOUSEHOLD AS AN ECONOMIC AGENT—UNIVERSITY OF CALIFORNIA.

A course on "The household as an economic agent" is given in the department of economics at the University of California. Prof. Jessica B. Peixotto has furnished the following outline:

I. *The problem of wants.*—(*A*) The theories of consumption advanced by the economists.

(*B*) The facts of consumption as observed by ethnographers, anthropologists, historians, and investigators of modern industrial society.

(*C*) The psychological bases of wants, utility, sense of beauty, display of power, conformity to tradition, etc.

II. *The household as the center of consumption.*—(*A*) The nature of the household.—1. The persons who compose the household; nature of the bond that brings them together; the relation of family life to the household and whether the two can be differentiated; why family life is considered a "norm" of social life; tendencies in modern family life.

2. The historic function of the household, and how the rôle of consumer pertained even when production as well as consumption centered there; the special characteristics of the modern household and how these affect its economic problems.

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[1] See bibliography, Part IV of this report, Bulletin, 1914, No. 39.

3. The material aspects of the household. The dwelling—origin, types, standards. The furnishings—origin, quantity, quality, problems of durability. The meals—origin, character, habits, and forms of serving and eating. The occupations of the household—ancient, mediæval, and modern.

III. *The problems of income.*—(*A.*) The facts.—What statistics show as to the amount and distribution of income. What seems to be the amount and proportion between minimum incomes, "normal" incomes, middle class, and large incomes. The factors that enter in to fix earning power. The factors which tend to rėduce and limit earning power—unemployment, wrong employment, crises, etc. The relative importance of the budget at the several levels of income.

(*B*) The sources of income.—The man as chief breadwinner. The supplements to his earnings, married women at work, income from children's labor, from boarders—causes and several effects of these supplementary aids. At what level of income other sources, investments, etc., appear.

IV. *The problem of budgeting.*—(*A*) Allotment of expenditure.—The chief classes of needs for which the income must provide—food, shelter, clothing, and the so-called "higher life." The chief wants each of the classes includes; the division of income for purposes of expenditure and why so little thought has been given to such division. The advantages of determining beforehand, or at least of carefully studying annually the amount to be spent in the different departments of expenditure. Engel's laws of expenditure, on what they are based and how far investigation proves them true in the United States to-day. What finally determines the relation between total income and the amount allotted to special wants. The needs that must go unsatisfied with a small income and the relative utility of the needs that come with increase of income. The considerations which enter into the problem of economical housekeeping. Relation of household accounting to household management. The development of the small family system and the utility of constant comparison of this type with the large family group when considering the problems of household finance. Standard of living, what the term means, and its bearing upon the whole question here under consideration.

(*B*) The purchase of shelter.—The supply of shelter—types, grades, and values. What on the whole determines the quantity, quality, and cost of shelter available in a given community. The merits of the several movements for standardization of shelter. The questions of renting or owning and of separate versus group dwellings, advantages and disadvantages as to cost, reaction on habits of living, etc. The factors controlling the amount of income that must be paid for rent. Relation between amount that can be paid for rent and amount that must be paid for operating expenses. The reasons for the increase in quantity and rise in cost of this latter category of expenditure. Consideration of the several items under running expenses with a view to determining the real utility of each.

(*C*) The purchase of food.—Motive of purchase, nourishment, taste, variety, cheer, tradition, etc. The factors which control expenditure of food, the number of persons to be served, the range of commodities available, the dietitian's rules, public-health regulations of the city, storage facilities of the house occupied, habits of eating, etc.

Home preparation of food in relation to costs; the need of constant inquiry and revision as to serviceability and cost. The delicatessen shop, its uses and possibilities.

The serving of food. The formal meal, relative costs of serving as against great simplicity. To what extent simplification can be applied to the serving of food without interfering with the fundamental purpose of the meal. The costs of hospitality; why these are chiefly food items and whether this should be the case.

(*D*) The purchase of clothing.—Motive for purchase, sex attraction, sense of beauty, desire to impose by splendid appearance, sex interest, habits of conformity, crave for variety, etc. What is meant by quality as applied to clothing. Fabrics employed and reasons for the diminishing stress on quality and the justification of "shoddy." Quantity of clothing; what determines and limits this. The theory of individuality in the use of clothes, and how far it proves a really solid theory. What rôle the knowledge of personal hygiene plays in controlling expenditure for clothing. Æsthetics and expenditure for clothing. Whether there is a shift in stress from expenditure for shelter and food to expenditure for clothing; reasons for this change. The nature and merits of Veblen's theory of dress. The connection between the rise of the manufacture of ready-made clothing and the increasingly rapid shifts in fashions, and the relation of this swift succession of fashions to costs and to the general efficiency of the household group. The lack of any definite principles for controlling the purchase of clothing.

(*E*) The expenditure of surplus.—At what level of income surplus appears. Relation between wise spending and the amount available for surplus. Whether lack of surplus tends to stultify such fine social traits as generosity, sympathy, foresight. The needs customarily taken out of surplus—insurance, investment, recreation, education, church, charity, provision against sickness, travel, gifts, and whether the usual name for them, "higher life," is not of doubtful utility. The costs added to this category by the growth of group rather than domestic recreation. The costs of active citizenship.

(*F*) The purchase of service.—Whether this item is a necessary running expense or an item of surplus. The problems of domestic service. The legal and social status of the servant, and how this, along with the standards and conditions of work, influences the number of persons available and the wages which must be paid. Vocational training as a remedy—chances of success or failure. The factors of cost in keeping servants. The advantages and disadvantages of using the services of persons outside the house. The probable effect of the present high cost of service upon household management. What can be said for and against labor-saving devices as substitutes for domestic service. Other alternatives.

V. *The industrial system from the consumer's standpoint.*—(*A*) The passing of the household industries with the factory.—What the household industries were, what they are. The border-line industries—that is, a careful examination of the problems of home-made or ready-made.

(*B*) The industries supplying the household needs.—What these are—relation of consumer to them as to character of output, conditions of work and wages for those engaged in the industry, etc.; sweating and the consumer. Seasonal trades and the consumer. Whether securing better conditions of work and wages is best done as consumer or as citizen, that is, the problem of voluntary *v.* legal action for improvement of work hours.

(*C*) The market.—The problems of buying—credit *v.* cash purchase, telephone ordering *v.* going to market one's self. The cost of delivery and the merits of the several proposals to do away with these. The lure of the shop and its influence on expenditure. The bargain counter—cause and reaction of the persistent "sales" of the present time. The mail-order system—nature, meaning, and reaction on the purchaser and the community. The principles of good buying and whether these differentiate from the principles of good spending.

VI. *Principles of spending.*—The conflicting social theories that control expenditure, love of conspicuous waste and thrift. Whether there can be any general principles controlling spending. Necessity of emphasizing the largely subjective character of all such principles and therefore the necessarily wide variation in details of expenditure. An attempt to formulate some principles of expenditure which conform to the facts of household experience and daily life.

Textbooks.—The textbooks used this year are: Talbot, Marian, and Breckenridge, S.—The Modern Household. Nearing, Scott—Financing the Wage Earner's Budget. Veblen, Thorstein.—Theory of the Leisure Class.

The literature of political and home economics is freely drawn upon, along with histories of industrial evolution, Government reports, price catalogues of department stores, etc. About 200 titles are placed on the reserve shelf.

Method.—The method of work is as follows: In addition to the general and special reading described, each student fills out certain household accounting sheets, working wherever possible with actual household expenditures. (University of California. Syllabus Series No. 42—Statement of the Cost of Living.) This semester about 40 per cent are reducing actual expenditures of middle-class incomes to the form these sheets require, and about 10 per cent are working on real expenditures at a minimum income. The rest will, of course, be largely estimates based on studies of current prices. Tabulations are then made and studies follow as to their meaning in relation to the facts and psychology of expenditure. Further, each student selects a special topic for term investigation. This year there are four groups, of from 10 to 20 each, studying—

1. Domestic service. Here field work in employment bureaus and studies in some private homes are being done.
2. Expenditure for clothing. Here field work consists in investigation of prices for outfitting—(*a*) an infant; (*b*) a child of 6; (*c*) a girl of 16; (*d*) a boy of 16; (*e*) a high-school girl and boy; (*f*) a college man and woman; (*g*) a bride.
3. Cooperative housekeeping as a means to reduce cost and raise efficiency. No field work.
4. Studies in the mail-order system, through correspondence with large mail-order houses and visiting local mail-order departments in department stores, practically entirely field work.

Lectures, once a week; discussion once a week; and special conferences in sections, covering a period of 40 minutes, once a week; extending through one-half year.

COURSE ON THE ECONOMIC POSITION OF WOMEN—UNIVERSITY OF CHICAGO.

Prof. S. P. Breckenridge, assistant professor of social economics in the department of household administration, University of Chicago, furnishes the following outline of topics and references on the economic position of women as treated in the course on the legal and economic position of women, which is one of the group of economic and social courses related to the household offered in this department:

I. Women have always worked.
    Bucher, Industrial Evolution, Chs. II, IV, VII.
    Mason, Woman's Place in Primitive Culture.

I. Women have always worked—Continued.
  Thomas, Sex and Society, American Journal of Sociology, IV, 474.
  The Barbarian Status of Women, Veblen, American Journal of Sociology, IV, 167, 352, 503.
  Eckenstein, Woman under Monasticism, Ch. I, 1, 2; Ch. VII, 1.
  Dixon, Women in the Paris Crafts, Economic Journal, 5, 209.
  Lapham, Women in Elizabethan England, Journal Political Economy, 9, 562.
  Taylor, The Modern Factory System, Chs. I, II.
  In American Colonial Times, Abbott, Women in Industry, Ch. II.
  In Early American Factory Organization, Abbott, III, IV, V, to p. 78.

II. They have not always worked for wages.
  Heather-Bigg, The Wife's Contribution to the Family Income, Economic Journal, IV, p. 50.
  Collet, Report on the Changes in the Employment of Women and Girls in Industrial Centers, Part 1, pp. 4–5.

III. They have been the victims of professional limitations.
  Bradwell *v.* The State, 55 Ill., 555; 33 U. S., 130; 16 Wallace, 130.

IV. Into what occupations do women go?
  Abbott, Woman in Industry, Ch. I, Ch. V, 78–96, Appendix B.
  Collet, The Employment of Women, Report to Labor Department, pp. 7–8.
  Gonnard, La Femme dans l'Industrie, pp. 32–33.

V. The age of gainfully employed women.
  Twelfth Census Statistics of Women at Work, pp. 10, 11, 12, 13.

VI. Marital status.
  Twelfth Census Statistics of Women at Work, pp. 10, 11, 12, 13.

VII. Special studies of industrial occupations.
  1. The Textile Trades, Abbott, Chs. VI, VII.
    Woman and Child Wage-Earners in the United States, Vols. I, IV, XVIII.
  2. Boots and Shoes, Abbott, Ch. VIII.
  3. Cigar Making, Abbott, Ch. IX.
    Butler, Women and the Trades, Ch. V.
    Economic Journal, X, 562.
  4. Clothing, Abbott, Ch. II.
    Butler, Chs. VI, VII, VIII.
    Woman and Child Wage-Earners in the United States, Vols. II, XVIII.
  5. Printing, Abbott, Ch. II.
    Macdonald, Woman in the Printing Trades.
    Butler, Ch. XVIII.
  6. The Telephone Service. Bureau of Labor Report on Investigation of Telephone Companies, Sixty-first Congress, second session, Senate Document No. 380.
  7. (*a*) The Economic Efficiency of College Women—Kingsbury Publications of Association Collegiate Alumnae, 1910, Series III, No. 20, p. 1.
    (*b*) Collet, Educated Working Women.

VIII. How far do men and women do the same work in the same way?
  Webb, Alleged Differences in the Wages of Men and Women, Economic Journal, I, 635.
  Women's Work in Leeds, Economic Journal, I, 46.
  U. S. Bureau of Labor, Work and Wages of Men, Women, and Children, 1894, pp. 26–27, Tables 415–547.

- IX. Has the separation a rational basis?
    1. Can women compete?
    2. Should they compete?
        - Ellis, Man and Woman, last ch., p. 384.
        - Thomas, Sex and Society, Ch. I.
- X. Under what conditions have they worked?
    - Drage, The Labor Problem, 227–231.
    - Hobson, Problems of Poverty, 149–161.
    - Hobson, Evolution of Modern Capitalism, Ch. XII.
    - Levasseur, The American Workman, Ch. VII.
    - Report of the Royal Commission of Labor, p. 94, volume devoted to women's work.
    - Booth, Life and Labor, I, 406 f.
    - Sweatshop Labor in Chicago, American Journal of Sociology, 6,602.
- XI. The problem of women's wages.
    1. General alleged differences between the wages of men and women.
        - Article by Webb, cited Economic Journal, I, 635; Economic Journal, II, 173.
        - Hobson, Evolution of Modern Capitalism, Ch. XII.
        - Final Report of the Royal Commission of Labor, p. 90.
        - Nicholson, Principles of Political Economy, III, p. 159 f.
        - Mill, Book II, Ch. XIV (Effect of Custom).
        - Abbott, Appendix C, p. 363.
    2. Earnings and expenditures—The living wage.
        - The Parasite Trades—Webb, Industrial Democracy, 749–755.
        - Cadbury, Work and Wages of Women in Birmingham, Ch. V.
        - Gonnard, La Femme dans l'Industrie.
        - Woman and Child Wage Earners, Vol. V.
    3. Consequence of low wages.
        - (*a*) Charity.
            - Royal Commission on Poor Law, Appendix, Vol. XVII, p. 325 ff.
            - Cadbury, loc. cit.
        - (*b*) Prostitution.
            - Working Women in Large Cities, 1894, pp. 73–77. Report of Bureau of Labor.
            - The social evil in Chicago.
- XII. Gainful employment and family life.
    1. The relation of marriage to work.
    2. The relation of employment of women to child life.
        - Taylor, The Modern Factory System, p. 425.
        - Fortnightly, May, 1875, vol. 23, p. 664.
        - Contemporary Review, Sept., 1882.
        - Perils and protection of infant life, Journal of the Royal Statistical Society, vol. 33, pp. 523–526 (1894, p. 1).
        - Jevons, Methods of Social Reform, pp. 156 ff.
        - Oliver, Dangerous Trades, Ch. V.
- XIII. Remedies.
    1. Legislation.
        - (*a*) Removing positive disabilities, Ill. Rev. Stat., 68, 64, 4.
        - (*b*) Admitting women to professions.
            - Re Bradwell, 55 Ill., 535; 16 Wallace, 33 U. S., 130.
            - Re Leach, 134 Ind., 665.
            - Laws of Maryland, 1902, p. 566, April 8, 1902.

XIII. Remedies—Continued.
- 1. Legislation—Continued.
  - (*c*) Granting the suffrage.
    - Bliss Cyclopedia of Social Reform.
    - Sumner, Woman Surage in Colorado.
- 2. Social protection.
  - Re Maguire, 57 Cal., 604.
  - Bergman *v.* Cleveland, 29 Chic. State, 651.
  - Ex parte Hayes, 98 Cal., 555; 20 L. R. A., 701.
  - See also 63 Chic. State, 202 et 208.
- 3. Industrial protection.
  - Hutchins and Harrison, History of Factory Legislation (English).
  - Woman and Child Wage Earners in the United States, Vol. XIX.
  - Goldmark, Fatigue and Efficiency.
  - (*a*) Working hours.
    - Commonwealth *v.* Hamilton Manufacturing Co., 120 Mass., 385.
    - Ritchie *v.* People, 155 Ill., 98 to 117.
    - Kelley, Ethical Gains through Legislation, IV, VII.
    - Brandeis Brief, Miller *v.* Oregon, 208 U. S., p. 412.
    - Ritchie *v.* People II, 244 Ill, p. 509.
  - (*b*) Work at night.
    - Outlook, July 13, 1907.
    - People *v.* Williams, 116 Ap. Div. Rep., 379.
    - Bulletin, International Labor Office, .1906–1908.
    - New York Labor Bulletin, June, 1907, pp. 135, 177.
  - (*c*) Sweatshop conditions.
    - Re Jacobs, 98 N. Y., 98.
    - State *v.* Hyman, 98 Md., 598 et 609.
    - Kelley, Ethical Gains through Legislation, VII.
    - The Minimum Wage, Trade Board Acts, 1909 Law Report, 9 ed. VII; 1909, ch. 22, p. 91.
    - Abbott, Women's Wages in Chicago; Some notes on available data, Journal of Political Economy, XXI, pp. 143–58.
    - Effect on Wages of Protected Classes, Hutchins and Harrison, App. A. Journal Royal Statistical Society, 1902, p. 302.
  - (*d*) Public provision for the unemployed.
    - Economic Review, April, 1907, 167; July, 1907, 290.
    - Economic Journal, March, 1907, 66.
    - Municipal Employment of Unemployed Women in London, Abbott, Journal Political Economy, XV, 513.
    - Webb, Organization of Labor Market, pp. 18–21, 204–211, 278–300, 341–51.
    - Law Reports, Statutes, 1905 (5 Ed. 7 C. 18).
- 4. Education.
  - Report of Committee on Industrial Education for Women of Industrial Educational Association, Bulletin 4.
  - Report of Massachusetts Commission on Industrial and Technical Education (1906), pp. 25–127.
  - Woman and Child Wage Earners in the United States, Vol. VII.
- 5. Trade unions.
  - Herron, Women in Trade Unions, Ill. Univ. Studies, 1900–1905, p. 455.
  - Association Collegiate Alumnæ, 1908, p. 40.

XIII. Remedies—Continued.
  5. Trade unions—Continued.
    Webb, Industrial Democracy, pp. 495–507.
    Gonnard, 198.
    Woman and Child Wage Earners in the United States, Vol. X.
  6. Welfare work of civic federation.
    McLean, Wage-Earning Women.
    Butler, Women and the Trades.
      (1) In extra-industrial organization.
      (2) In industrial; the small unit, the home-used power.
  7. Influence of intelligent consumption.
    1. The demand for the Consumers' League label.
      Gonnard, pp. 211–218.
      American Journal of Sociology, V, 289, Aims and Principles of the Consumers' League, Kelley.
    2. Demand for the union label.

LAW OF THE HOUSEHOLD—UNIVERSITY OF IDAHO.

Dean George D. Ayres, of the college of law, University of Idaho, has furnished an advance statement of a course on the law of the household which he proposes to give for the students of the home-economics department of the university. He states that the course is of the informational type rather than a discussion of legal principles and training in legal reasoning, as in the usual law course.

> What is needed for the home-economics students is a general and accurate statement of the things that a woman should know concerning the law with which she will be brought into contact the most. I fancy that it is about what a lawyer, an old friend of the family, would say to the widow of his friend and to her daughters in case they were likely so to be situated that they could not always see him and he were advising them for a long time to come. There would be some things he could tell them that would be likely to keep them out of difficulty, and he might be able so to draw the line that they would have an idea correctly as to when they ought to consult a lawyer.
>
> I shall go over the Idaho law regarding the home and its members, in their relations to each other and to outsiders, the laws concerning husband and wife, married and unmarried women, parent and child, guardian and ward, the laws concerning descent of real estate and distribution of personal property in Idaho, a general idea in regard to courts of probate, and what a woman should do who has reason to make use of them, the law of the property rights of husband and wife as such, their respective rights in regard to each other and over their children, the laws of marriage and divorce and of annulment of marriage. I shall say something concerning the management of property and regarding investments. A general discussion of the pure-food laws will be included, outlining at least their purpose and scope. It will be difficult to get my hearers in a short course to catch the spirit of it all with enough detail to enable them to act correctly as a rule and to know just when to consult wise, careful, and considerate counsel; but my aim, as at present advised, will be somewhat in the direction outlined.

COURSES IN SOCIOLOGY.

Prof. Charles A. Ellwood, professor of sociology in the University of Missouri, contributes the following statement on "Courses in sociology which ought to be provided in connection with a collegiate department of home economics."

Home economics is a good example of the complexity of an applied social science. So far as it deals with the material aspects of the home, it rests, of course, chiefly upon the physical sciences, and many of its advocates have apparently seen nothing in their science but these material problems of the household. Physics, chemistry, physiology, bacteriology, etc., have accordingly appealed to them as the only sciences necessary for the pursuit of home economics. Such a view is, of course, possible, if one regards the "home" or the household as simply an adventitious collocation of persons whose main interests are in securing suitable food, clothing, and shelter. In this sense home economics would apply to a hotel, or a rooming house, or any other group of people practicing a single economy, as well as to a home.

If we take a different view, however, and regard the family and the home as great institutions of society, carrying on not only within themselves all phases of a normal human life, but also related to a larger life outside of themselves, then at once home economics becomes an altogether different subject. Its center of interest is no longer in the material equipment of the home, but in the home or household as a form of human association; that is, its center of interest is in the relations of individuals to one another, and not in their relations to things.

It is evident that, as soon as this view is taken, home economics becomes a branch of applied sociology, with the creation of an ideal home and family life as its great purpose. It no longer rests chiefly upon the physical sciences, but must get its point of view and spirit from sociology; for sociology is the science which has as its center of interest the relations of individuals to one another. Of course, sociology is itself almost as much of a biological or physical science as it is a psychological or mental science. Nevertheless sociology finds that the main thing in the relation of individuals to one another is the way in which they are adjusted to one another, and this adjustment undoubtedly depends as much upon spiritual as upon material factors. Not only do physical environment, health, and so on, affect the relations of individuals to one another, but also habits, purposes, and ideals of life.

From a sociological standpoint, then, the home, or household, is one of the general institutions of society intrusted with the carrying out of certain important functions. Just what these functions are, or ought to be, can be clearly understood only from a careful study of general sociology, which takes up the whole problem of the origin, development, structure, and functions of the forms of human association. How the home, or household, originated, how it has come to be what it is to-day; what its functions are in society; how its efficiency can be increased; in what way its present dangers can be overcome; what the ideals are that shall guide in seeking to control and direct its future development—all of these questions are rooted in general sociology. Even the young student will be hardly prepared to understand the real significance of courses in home economics in their relation to our present civilization without some preliminary study of sociology. On the other hand, a student who once understands the home in its relation to the larger life of which it is a part, will approach all the problems of home economics with a deeper appreciation of their connection with real human life.

I would, therefore, strongly advocate that an elementary course in sociology should precede or accompany even an elementary college course in home economics. Other courses in sociology should be taken along with the more advanced courses in home economics. At least three courses in sociology should be provided for college students in home economics, and the first two of these should certainly be required.

First, there should be an elementary course in general sociology, taking up in a systematic manner the study of the principles of social organization and evolution. In this course the factors in the physical environment, in the biological constitution of man, and in his psychological nature which affect the social life should be thoroughly studied. The whole question, in other words, of the origin and development of civilization, on the one hand, and of the structure and functioning of present institutions on the other, should be gone into with abundant concrete reference to present-day problems and situations.

Secondly, there should be a course on "domestic sociology," dealing specifically with the origin, development, structure, and functioning of the family and the home as human institutions. In this course there should be taken up, first of all, the concrete study of the structure and functions of the family; then the questions concerning the origin and evolution of human family life; then the historical development of the family in western civilization; then its present problems and tendencies, its relation to modern industry, to population and the birth rate, to the social and moral life of the community; finally, the functions of the family in the transmission of physical heredity, in the physical care of the child, in the transmission of the spiritual possessions of civilization, and in the development of moral ideals and standards should be considered. The whole course should be such that none of the burning problems that concern the family and the home life of the present should be left unconsidered.

These first two courses might be advantageously combined into one, provided sufficient time were given. The study of the family could be made to illustrate the principles of general sociology, while at the same time the principles of sociology would guide in reaching conclusions in regard to practical problems concerning the home. Not less than six hours toward graduation should be allowed for these two combined courses.

A third sociological course, which will be needed by students in home economics, is a course in the study of practical movements for general social betterment. The home as an institution is open to all the influences of the community life, and should therefore participate in forwarding all movements for social improvement. The relation of these movements to the home life is therefore vital. Such movements as public health and sanitation, the public protection of childhood and motherhood, public education, housing reform, the proper treatment of dependent, neglected, and delinquent children, the relief of the poor, the care and training of defectives, the proper treatment of the criminal, the suppression of vice, and all other organized movements for general social betterment should receive careful consideration with reference to their relationship to the home life.

Section 3. COLLEGE COURSES IN NATURAL SCIENCE RELATED TO THE HOUSEHOLD—CHEMISTRY, PHYSIOLOGY, BACTERIOLOGY, HUMANICS, PHYSICS, ENTOMOLOGY.[1]

CHEMISTRY AS RELATED TO HOUSEHOLD ECONOMICS—SIMMONS COLLEGE.

Prof. Alice F. Blood furnishes the following statement:

Simmons College, Boston, offers two alternative series of courses in chemistry to students of household economics who are candidates for a degree and specializing in household science subjects. A course in descriptive inorganic chemistry serves as the foundation for all subsequent work in chemistry. Eight hours a week throughout the year are devoted to the course. Two lectures, two recitations, and four laboratory hours are given. Recitation sections are small, and each student receives individual attention. The course is devoted primarily to a careful study of the fundamental principles of inorganic chemistry, and every effort is made to develop reasoning power. The student is encouraged to observe and explain the chemical phenomena she meets in daily life, and part of the laboratory time is devoted to experiments upon materials of household interest. Such experiments in applied chemistry are regarded as incidental to the development of principles rather than as ends in themselves, and are included only when they can be developed logically in relation to the pure chemistry under consideration.

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[1] For additional references, see bibliography, Part IV of this report, Bulletin, 1914, No. 39.

Beginning with the second year a diffentiation is made between the long and the short sequence in chemistry. Students who have shown a special aptitude for science are encouraged to continue their work through the four years. The second year is devoted to the study of organic chemistry, the time allotted and the method of treatment being the same as in the inorganic work. The course is essentially pure organic chemistry, but the fact is kept in mind that the students have for their goal the study of foods in their chemical and physiological aspects. In the third year seven hours each week are given to quantitative work. Six hours are given to laboratory work and one hour to lecture and discussion. The greater part of the first term is occupied in developing quantitative technique and the second term with the application of quantitative methods to food analysis. In the lectures of this course the composition of foods is thoroughly discussed and analytical methods are considered both in their relation to dietary studies and to the detection of food adulteration. In the fourth year a student may extend her familiarity with methods of food analysis or devote her time to the study of some simple problem.

The larger number of students complete their chemistry in the second year with a course in elementary, organic chemistry. The same amount of time—eight hours per week—is given to the subject as is required for the corresponding course in organic chemistry for the long sequence. This includes two lectures, two recitations, and four hours of laboratory. While it is intended that the course shall have a disciplinary value, it is the main object to equip the student for the understanding of the chemical aspects of cooking, bacteriology, physiology, and dietetics. The typical groups of organic compounds are described in logical sequence, but particular stress is laid upon those compounds that occur in plant and animal tissues and upon the changes food constituents undergo in cooking, in digestion, and under the action of microorganisms. About a third of the laboratory time is devoted to experiments usually given in a course in physiological chemistry, and typical qualitative tests for food adulteration are also included. To make time for these laboratory applications of organic chemistry, many of the organic preparations and reactions usually carried out on a quantitative basis are here given as test-tube experiments. It is, in general, the aim to present experiments in applied chemistry as illustrations of the principles of pure chemistry rather than as isolated procedures. The following examples serve to illustrate the point of view. The test for benzoate of soda in foods is made at the time that the general properties of benzoic acid are being studied; the test for bleached flour is given as an application of the diazo reaction; the use of alcohol as a solvent in the preparation of tinctures and essences and in the removal of grass stains is studied in connection with the general reactions of alcohol.

We hope to prepare in these courses teachers of household science who are able to appreciate the bearing of chemistry on their work, who are able to solve the problems as they arise by scientific methods, and who are able to keep up with the advances in science which have a bearing on their work.

PHYSIOLOGY AS RELATED TO HOUSEHOLD ECONOMICS—SIMMONS COLLEGE.

Prof. Percy G. Stiles, recently of Simmons College, now of Harvard University, furnishes the following regarding courses in physiology related to household economics in Simmons College, Boston:

Four courses are given, adapted to the varying needs of four groups of our students. Two of these figure in the program for those who are spending four years with us and who are candidates for the degree of B. S. The majority of these regular undergraduates elect what is called "short biology," and for these students a course in physiology is introduced in the second semester of the second year. It has been preceded by a year of general chemistry, a half year of organic chemistry, a year of physics, and a half year (90 hours) of general biology. Physiology is presented to this group in 30 lectures, with occasional demonstrations, and 30 recitation periods. All the main divisions of the subject are dealt with, but the facts about digestion, metabolism, animal calorimetry, and the balance of income and outgo are given a central position. The discussion of the hygiene of nutrition is deferred to the second semester of the third year, when it forms an important part of a 45-hour course called "advanced hygiene."

A smaller number of our regular students elect more extensive work in biology, and these take physiology in their third year. The course runs through both terms and amounts to 120 hours. Nearly half of this is laboratory work. The students enrolled have had all the preparation described above and in addition a course of 90 hours in anatomy and histology. The length of this major course in physiology is such that all the material connected with nutrition can be given at least as fully as to the other group, while the remaining subjects are amplified to the same scale. The result is a symmetrical rather than a specialized course, and it is of the same scope usually aimed at in good medical schools. Howell's Textbook and Cannon's Laboratory Course are used.

The course in advanced hygiene previously referred to is common to both groups.

A course for college graduates—chiefly intended for those who are candidates for our degree after two years of postgraduate study—is offered in the first semester of their second year. It resembles the minor course for undergraduates, but is given in 45 hours instead of 60; it is assumed that the maturity of the students warrants a more condensed presentation of the subject. Our experience has not wholly justified this supposition.

Finally, we give a course for those who are with us only for one year and who are not candidates for a degree. These students have had general chemistry, but practically no other supporting science. They take bacteriology simultaneously with physiology. For this course Stiles' Nutritional Physiology[1] was written. It is necessary to include the elements of general biology in opening the treatment and the hygiene of nutrition later on. The course for this elementary class comprises 45 lectures and 30 recitations. There is no individual laboratory work, but there are a number of demonstrations.

GENERAL BACTERIOLOGY AND FERMENTATIONS—IOWA STATE COLLEGE.

Prof. R. E. Buchanan, professor of bacteriology, Iowa State College, furnishes the following statement:[2]

General bacteriology and fermentations is a required subject for all students in the division of home economics in the second semester of the junior year.

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[1] Stiles, Percy G. Nutritional Physiology. Philadelphia, Saunders, 1912.

[2] See also Buchanan, Robert Earle, and Mrs. E. D. Household Bacteriology, for Students in Domestic Science. New York. Macmillan, 1913.

By this time the student has had five semesters of work in chemistry, including general chemistry, qualitative analysis, organic chemistry, food analysis, and physiological chemistry. The course consists of two recitations or lectures per week and two 2-hour periods in the laboratory. In the lecture work a short historical introduction is given with emphasis upon the theory of spontaneous generation and the development of germ theories of fermentation and decay and of disease. The morphology, classification, and distribution of the bacteria, yeasts, and molds is next treated. A larger relative proportion of time is devoted to a discussion of yeasts and molds than in the classical courses in bacteriology. Several lectures are devoted to an outline of the physiology of microorganisms, including a study of the effects of physical agencies, such as moisture, osmotic pressure, light, and temperature; relation to chemical environment, including the topics of antiseptics and disinfectants; changes in physical environment produced by microorganisms and the synthetic and analytic changes brought about by organisms in the media in which they live.

About one-third of the semester is devoted to the topics already mentioned. The remaining two-thirds of the semester is divided nearly equally between a consideration of fermentations and lectures on the relation of microorganisms to health. Under the former heading, the enzymes of microorganisms, their classification, and their importance are considered. Lectures are given upon the various methods of food preparation, such as heat, cold, desiccation, use of preservative substances, etc., with particular reference to microorganisms which may cause spoilage. This is followed by lectures upon changes of economic importance brought about by microorganisms in various inorganic and organic compounds. This includes an outline of the nitrogen, sulphur, phosphorus, and carbon cycles in nature. Alcoholic fermentation and the principal types of yeast responsible are next considered. Special emphasis is laid upon alcoholic fermentation of milk, and upon panary fermentation. The principal organisms responsible for lactic acid fermentation and their importance in the souring of milk and the preservation of certain foods, such as sauer kraut, are next discussed. Acetic fermentation, including methods of vinegar manufacture; butyric, citric, oxalic, and other acid fermentations, and the deterioration of foods preserved by means of acids due to the oxidation brought about by molds, are next considered. The fermentations of cellulose, starch, the hemicelluloses, and pectin are considered in their economic relations. Under the last topic some time is devoted to a discussion of methods of retting in preparation of linen and hemp. The effects of microorganisms upon the organic nitrogenous molecule, particularly the disintegration of proteins with formation of flavoring substances, substances having disagreeable odors, and ptomaines are emphasized. The practical application of this knowledge is made in the discussion of the ripening of meats and the preparation of various cheeses and other food products.

The student in home economics should know not only the relation of microorganisms to foods, but should have as well sufficient knowledge of the relation of microorganisms to disease to enable her to study such topics as home sanitation, home building, and home nursing intelligently. One lecture is devoted to the various theories of disease, methods of spreading of disease, types of disease, and the uses of animals in scientific work. We find that it is helpful to give the student a clear understanding of exactly how and why animals must be used experimentally in the laboratory. Enough time is devoted to a discussion of immunity to enable the student to secure a general idea of the means used by the body in resisting disease, a knowledge sufficient for intelligent use of such terms as antitoxin and vaccine. The principal organisms causing disease in man are next discussed, particular emphasis being laid upon the points of entrance into the body, the channels through which the organisms leave the body, and the methods of prevention and immunization. The subject of water contamination, methods of examination, methods of purification, and relationships to health are considered in some detail. The same topics are considered with reference to milk and other foods.

The laboratory work is devoted to demonstration of the facts studied in the classroom, so far as time permits.

"HUMANICS," A COURSE IN APPLIED BIOLOGY—UNIVERSITY OF WISCONSIN.

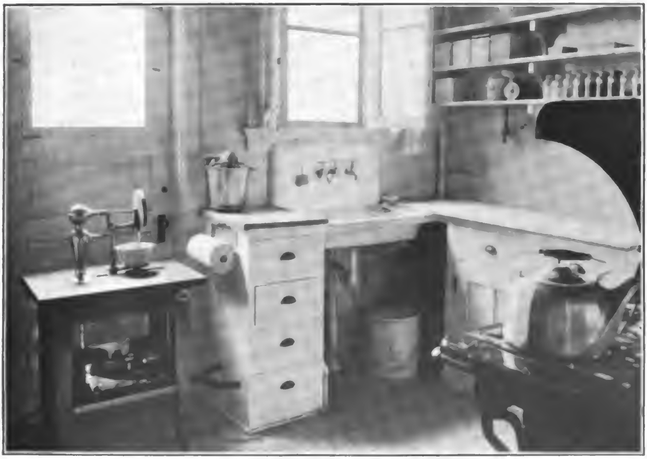
Prof. Abby L. Marlatt gives in the department of home economics of the University of Wisconsin a course in biology applied to human problems which is intended to—

> focus in one course such discussion as might lead to a wiser understanding of the fundamental laws of heredity and environment, as typified in the human race. * * * The central thought of the course is conservation of human life by improving individuals, homes, cities, so that future generations may reach higher levels of efficiency than those preceding them have reached.

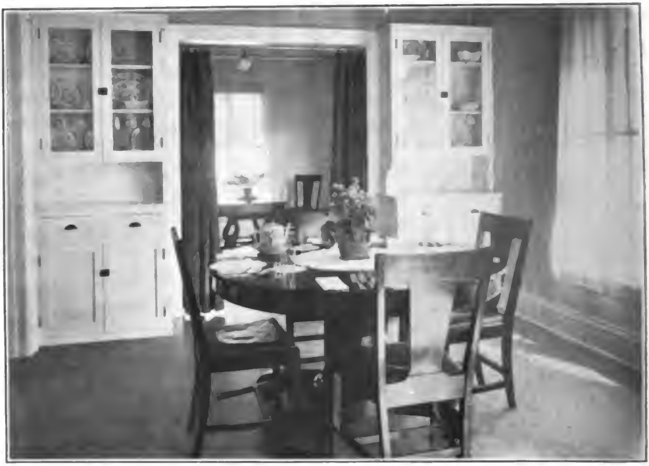
The course includes the following topics:

I. Embryology—Development of the infant with a study of cell division.
II. Theories of inheritance—Physical basis of theories; modern development by Mendelian law.
III. Effect on the germ-plasm of social diseases, alcoholism, and the drug habit—The inheritance of acquired characteristics; the effect of mental diseases in parents.
IV. Study of social evils and problem of education with regard to them.
V. Development of child after birth—Physical development; mental development; adolescence; race characteristics; effect of country life and town life on physical and mental development.
VI. Review of theories of education as applied to types of children—School statistics showing rate of growth in boys and girls.
VII. Emotional development—Education during adolescence.
VIII. Problems of city and State with reference to infant mortality—Effect of woman's industrial work on infant mortality; study of laws of Europe and America as affecting woman in industry; study of death statistics, showing diseases and effect of the race on same.
IX. Civic efforts toward education of the foreign population and the poor and ignorant in the large American cities so as to reduce infant mortality—French system for mothers; necessity for survey of cities.
X. Institutional life—Effect on death rate; effect on physical development; effect on mental development; cost to the country; remedies.
XI. Reduction of birth rate and effect on population—Duty of the educated in the preservation of the race.
XII. Child in industry—Effect upon State laws and necessary legislation.
XIII. Study of environment.
XIV. The housing problem.
XV. The education of the will, with reference to environment.
XVI. Study of nervous states and their hygiene.

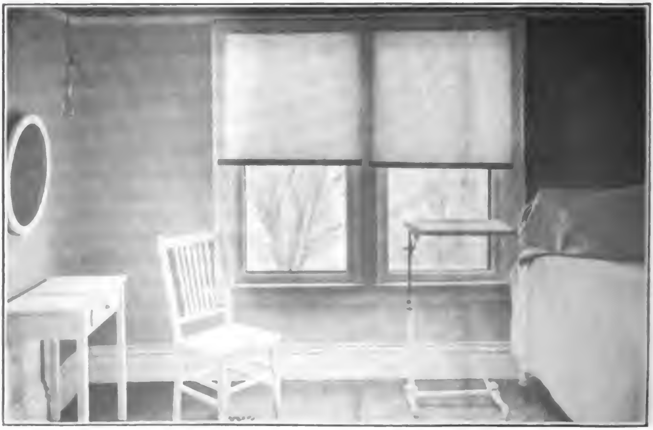
A. PRACTICE COTTAGE FOR HOME ECONOMICS STUDENTS, UNIVERSITY OF WISCONSIN, MADISON, WIS.



B. KITCHEN, UNIVERSITY OF WISCONSIN, PRACTICE COTTAGE.



A. DINING ROOM, UNIVERSITY OF WISCONSIN, PRACTICE COTTAGE.



B. BEDROOM, UNIVERSITY OF WISCONSIN, PRACTICE COTTAGE.

HOUSEHOLD PHYSICS—KANSAS STATE COLLEGE.

Courses in applied physics for women are developing in various institutions.[1] In the Kansas State Agricultural College home economics students who have not studied physics are given an introductory year of physics, three hours a week of class work and two hours of laboratory, followed by a required 12 weeks' course in household physics. Prof. E. V. Floyd, who gives the two courses, has furnished the following statement regarding them:

> Physics can be made more useful for girls by selecting illustrations drawn from their own experience and by making applications of concern to them.
>
> Teachers of physics are very generally agreed with respect to the physical principles which should make up a first course in the subject. There is, however, slight agreement with respect to the relative emphasis which should be placed on these principles. The reason for this is obvious if the vast difference in interests, the difference in environment, and the difference in the lives of students before entering the physics course, as well as after leaving it, be taken into consideration.
>
> To illustrate: Gas as a fuel in a gas engine, in a course for girls, should receive less emphasis than gas as a fuel for the gas range in the home. The principles of mechanics of fluids can be discovered and thoroughly mastered in a study of water systems for homes and for cities.
>
> In brief, in this course the teacher studies the application with the class and discovers in it the underlying physical principles. This does not mean that the course is devoid of principles. It means rather that in a course so conducted the student has a firmer grasp of physical principles than he has in case the abstract principles are first studied. As a rule, he is left to find the applications for himself. This he seldom does, and physics has failed to assist him in understanding his environment. Let the student discover the physical principle where he can again use it—in its application.
>
> The textbooks in first physics are of the nature of dictionaries and are used as such in the introductory course. Half to two-thirds of the class hour is used in a study guided by the teacher. This study is done in the classroom, at the city pumping station, at the ice plant, the electric light plant, anywhere in fact where the physical principles we are in search of are at work.

The advanced 12 weeks' course in household physics, originally outlined by Prof. J. O. Hamilton, head of the department, is given by Prof. Floyd as a series of lectures, since there is no textbook available. Studies of the applications of physics are made and underlying principles are sought in order that other applications may be made by the student. The topics treated in this course are as follows:

Mechanics—the weights and measures; mechanics of the sewing machine; surfaces, polishing and sharpening; physics of water supply; plumbing and sewage disposal; gas supply; vacuum cleaners; household tool chest. Heat—fuels; stoves; house heating—hot air, hot water, steam; refrigeration; ventilation. Electricity—commercial sources; measurement and sale; heating effect of electric current; chemical effect; magnetic effects; gasoline electric-generating plant; electric wiring; telephones. Light—natural source of light; the eye; artificial sources of light; illumination; color.

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[1] Those interested should see also Part II of this report (Bul., 1914, No. 37, p. 98), where a high-school course in household physics is outlined, and should also consult the texts in this field there mentioned.

APPLIED ENTOMOLOGY—INSECT PESTS OF THE HOUSEHOLD.

Prof. J. G. Sanders, professor of economic entomology at the University of Wisconsin, contributes the following suggestions regarding topics in applied entomology which concern the household:

In comparison with the tropical regions, the temperate zones of the earth are rather free from those destructive or dangerous forms which occasionally menace human life and property. However, an increasing number of insect guests of our households are being indicted as dangerous intruders and many are under suspicion. More general diffusion of knowledge concerning the control of household pests and prevention of their ravages is highly desirable. The appended outline of household insects offers a general summary of the various subjects for popular reading or for careful study or investigation. Necessarily, various repetitions occur under the several headings on account of the omnivorous habits of some of the pests. Several helpful books and bulletins are cited below.

HOUSEHOLD INSECTS AND RELATED CREATURES.

Insects, etc.
- Annoying.
- Disease carriers.
- Destructive.

Controls
- Preventive.
- Remedial.

Annoying, but not necessarily destructive forms.

Ants.
Bedbugs.
Cockroaches.
Fleas.
Lice.
Mosquitoes.
Flies.
Fish moths ("silver fish").
Wasps and hornets.
Non-insect forms:
- Mites and "chiggers."
- Ticks, spiders.
- House centipede.

Disease carriers and transmitters.

Mosquitoes.
- Malaria.
- Yellow-fever.

Flea (bubonic plague).
Body louse (typhus fever).
Bedbug.
Cockroach.
House or typhoid fly (several intestinal disorders).
Ticks (spotted and relapsing fever).

Essentially destructive forms.

House (building or structure):
- Termites (white ants).
- Carpenter ants.
- Carpenter bees.
- Wood-boring beetles.

Food pests:
- Cockroaches.
- House ants.
- Cheese skipper.
- Lard and ham beetles.
- Moths Cereals and
- Beetles dried fruits.

House furnishings and clothing (fabrics, furniture, and books):
- Moths (clothes).
- Carpet beetles.
- Book louse.
- Cockroaches.
- Wood-boring beetles.

Ornamental house plants:
- Scale insects (mealy bugs).
- Aphis.
- White fly.
- "Red spiders."
- Caterpillars.
- Beetles.
- Maggots.

Controls.

Remedial methods:
- Fumigation—
  - Potassium cyanide (dangerous).
  - Sulphur fumes.
  - Carbon-bisulphide.
  - Carbon tetrachloride.
  - High temperature (120°-130° F.).
  - Pyrethrum.
- Poisons—
  - Baits and traps.
  - Arsenicals.
  - Contact insecticides—
    - Oil emulsions.
    - Gasoline and kerosene.
    - Turpentine.
    - Hot water and steam.
- Sprays and dips:
  - Soap solutions.
  - Tobacco decoction.
  - Kerosene emulsion.
  - Carbolic emulsion.
  - Paris green.
  - Arsenate of lead.
  - Sulphur (powdered) (for red spider).

Preventive methods:
- Sanitation.
- Drainage.
- Destruction of breeding places.
- Screens.
- Sealed containers.
- Exposure to sun (clothing, etc.).
- Camphor gum.
- Whitewash.
- Kalsomine.
- Ointments.
- Fumigation—
  - Tobacco.
  - Pyrethrum.
  - Sulphur.

REFERENCES.

I. *United States Bureau of Entomology—Bulletins.*

No.	4	Principal Household Insects of the United States.
	5	Insects Affecting Domestic Animals.
	8	Insects Affecting Stored Vegetable Products.
	25	Mosquitoes of the United States.
	27	Some Insects Injurious to Ornamental Plants.
	78	Loss Through Insects that Carry Disease.
	90	Insects Affecting Stored Cereal Products.

II. *United States Bureau of Entomology—Circulars.*

No.	5	Carpet Beetle or "Buffalo Moth."
	13	Mosquitoes and Fleas.
	19	The Clover Mite.
	34	House Ants.
	36	The True Clothes Moths.
	37	Hydrocyanic Acid Gas for Fumigating Greenhouses.
	40	Mosquitoes of North America.
	46	Hydrocyanic Gas Against Household Insects.
	47	The Bedbug.
	48	The House Centipede.
	49	The Silver Fish.
	50	The White Ant.
	51	Cockroaches.
	57	The Greenhouse White Fly.
	71	House Flies.

III. *United States Department of Agriculture—Farmers' Bulletins.*

No. 45 Insects Injurious to Stored Grain.
127 Important Insecticides.
145 Carbon Bisulphide as an Insecticide.
155 How Insects Affect Health in Rural Districts.
450 Some Facts About Malaria.

IV. *Bulletin New York State Education Department.*

No. 465 (Mus. Bull. 136) Control of Flies and Household Insects.

V. *Books.*

The House Fly. Howard. F. A. Stokes Co., New York.
Injurious Insects. O'Kane. Macmillan Co.
Insects and Disease. Doane. H. Holt & Co.
Our Insect Friends and Enemies. Smith. Lippincott Co.

Section 4. COLLEGE COURSES IN FOOD AND NUTRITION.

A GENERAL COURSE IN FOODS—UNIVERSITY OF MISSOURI.

Prof. Amy L. Daniels furnishes the following statement regarding a course in the University of Missouri:

The course entitled "General foods," offered at the University of Missouri, has for its aim the teaching of the fundamental principles of human nutrition. The course embraces a study of the composition of foods, their preservation and preparation for the table, the changes produced during digestion and absorption, and the relation of the various foodstuffs to metabolism. It is a ten-hour course (five hours for two semesters), consisting of two laboratory periods of 60 minutes each, and three lecture periods of 50 minutes each. During the time when meals are being served, each student responsible for the meal necessarily puts in a larger number of hours than is scheduled.

Students registering for the course must have completed a five-hour course in inorganic chemistry, a three-hour course in organic chemistry, a five-hour course in botany or some biological science, and either our introductory course in home economics (Home Economics I) or its equivalent. Physiology and bacteriology must be offered as prerequisites or they must be taken parallel with the general foods' course.

In general, the method of conducting the course is inductive; formal receipts and directions are not given. The students are led to reason from principle to application, and to learn by experimentation the relationship of the different proportions of ingredients used in the various dishes prepared. When definite directions are given, less thought enters into the processes and the work becomes mechanical. During the course three sets of notes are kept; one records the laboratory experiments and receipts which have been worked out, a second the lecture notes, and a third, which may be kept in the form of a card catalogue, contains the reading notes.

No one book has been found sufficiently comprehensive to suit the requirements of the course. The Principles of Nutrition, by Jordan, and The Chemistry of Food and Nutrition, by Sherman, are the texts regularly used; but Lusk's Science of Nutrition, Rose's Laboratory Manual of Dietetics, Hutchison's Food and Dietetics, Halliburton's Chemical Physiology, Wiley's Foods and Their Adulteration, and the many Government and experiment station bulletins are used frequently. From time to time reading assignments are given in the various periodicals dealing with the different subjects of the course.

The equipment for the work consists of two laboratories, one in which the chemical and physiological experiments are performed, and another in which the experiments pertaining to food preparation are carried out. Sometimes both laboratories are in use during the same lesson, at other times one laboratory may be used exclusively for a series of several lessons. The diningroom is used for serving the meals, which are prepared for typical families at definite costs.

The subject matter of the course consists of a study of the composition of the various foods, with methods of preserving and preparing these for use. Canning, preserving, pickling, the making of jams, jellies, etc., are considered in order. The composition of the carbohydrates, their characteristics, classification, means of identification, as well as the changes produced during cooking, digestion, and absorption, are studied. Typical dishes from the carbohydrate foods, for example, fruits, vegetables, and cereals, are cooked, applying the principles learned in chemical and physiological study of carbohydrates. The ash constituents, fats, and proteins are studied in the same detail, applications being made in the cookery of eggs, fish, meats, cheese, the making of salads, custards, frozen dishes, etc. Several kinds of baking powders are analyzed; batters and doughs in which baking powder, air, or steam is the leavening agent are prepared, and the proportions of materials used to make breads, cakes, and pastries are worked out. The action of yeast and gas-producing bacteria are studied in connection with bread-making. Some time is devoted to testing for food adulterants. A considerable amount of time is spent on infant feeding. Milk formulæ are prepared according to different methods of modification, and the significance of the different substances found in the excreta of infants is considered in relation to the food intake. Methods of analyzing these substances are studied. Consideration of the dietetic needs of the body at different ages and under different physiological conditions forms a considerable part of the course. Meals are planned in accordance with the different dietetic standards, prepared and served for definite costs.

At the end of the course it has been found sometimes that students who are able to pass creditable written examinations have not acquired sufficient skill in cooking to warrant their being recommended for teaching positions. In order to meet this difficulty, the grade is withheld until the student has satisfied the requirements of the course by passing certain examinations in practical cooking, which are given at the beginning of the fall term following the completion of this course. In this way the student has an opportunity to acquire skill during the summer months.

COURSE IN FOOD AND NUTRITION—UNIVERSITY OF ILLINOIS.

The following statement is contributed by Prof. Nellie E. Goldthwaite, of the University of Illinois.

In the household science department of the University of Illinois five food courses are offered. These, in order, are as follows: Course 1, Principles of the selection and preparation of food; Course 6, Economic uses of food; Course 14, Special problems in connection with the service of food; Course 5, Dietetics; Course 4, Food and nutrition.

As indicated by this enumeration, the last mentioned, course 4, is the most advanced one of the series, courses 1, 6, and 5, in order, being prerequisite to it. A few words concerning these prerequisite food courses will serve to make clear the foundations upon which course 4 is built.

In recognition of the fact that an intelligent study of foods rests primarily upon a knowledge of the fundamental facts and principles of several of the natural sciences, the University of Illinois requires some preliminary science training as prerequisite to the beginning of food courses. Accordingly, students to be eligible for course 1, Selection and preparation of food, must have completed one year's work in general chemistry (5 hours) at the university. Course 6, Economic uses of food, is a continuation of course 1. These two courses (3 hours each) constitute one year's work and are fundamental to succeeding courses in foods.

In these courses the student has learned the fundamental processes that underlie the preparation of food. She has gained a knowledge of food principles. She has learned, as stated in the Laboratory Guide (Bevier and Van Meter), "the principles of cooking by the same general methods as those by which the principles of chemistry are taught." The dishes prepared have been chosen because they illustrate principles of cooking. Throughout both these courses the economics of food preparation have been emphasized.

As the study of foods is continued, the preliminary knowledge of science required for entrance to courses 1 and 6 does not suffice; therefore, this knowledge is increased by succeeding courses in pure science, taken either as prerequisite to the more advanced food courses or parallel with them.

Hence, course 5, Dietetics, increases its prerequisite science requirement by a second semester's work in chemistry (5 hours), and by one semester's work in physiology (5 hours), which, in turn, demands as a prerequisite, zoology (5 hours).

The course in dietetics aims to make the student intelligent concerning the food requirements of the normal human body under varying conditions of age and activity; the means by which the subject of human nutrition has been and is being studied; the original sources of information on the subject; the viewpoints and conclusions of various investigators. The student is required to solve many problems, the data for which are taken from the experimental work of these investigators. By laboratory practice the course aims to present in concrete terms the deductions discussed in the classroom; to give the student intelligent ideas concerning the amount and kinds of fuel which she is daily supplying to her own body. This course aims further to give some knowledge concerning the dietetic treatment of diseases and to give some practice in the preparation of invalid dishes.

Course 4, Food and nutrition, the final undergraduate course in foods, succeeds course 5 in the curriculum. To take this course intelligently, further knowledge of science on the part of the student is demanded; hence, course 4 adds to its list of prerequisites the following courses in pure science: Chemistry, quantitative analysis (5 hours); organic chemistry (5 hours); and bacteriology (5 hours), which may be either a prerequisite or a parallel course.

Because of the extent and character of this science basis, course 4 is essentially for seniors or for graduate students. It is a five-hour course, and the instruction is given by means of lectures, laboratory work, reading, recitations, and discussions. Papers dealing with certain topics connected with the course are required of the student at intervals. Ten hours per week are spent in classroom and laboratory.

The laboratory instruction follows the Food and Nutrition Manual prepared by Miss Bevier and Miss Usher, proteins, fats, and carbohydrates being taken up in order.

In studying the proteins, constant reference is made to the classification adopted by the joint committees of the American Physiological and Biochemical Societies. By following this classification the intricate chemistry of the proteins appears in clearer light than is otherwise possible.

Various representatives of the three general classes of proteins, simple, conjugated, and derived, are tested in regard to elementary composition; their solubilities; their color reactions; their precipitation reactions, including salting-out experiments; their behavior on heating to various definite temperatures; their behavior under the combined influence of heat and of food accessories, such as salt, or salt and acetic acid. Typical proteins are subjected to digestion experiments, and the products both of peptic and of pancreatic digestion noted.

This study of the proteins is followed by that of the fats. . These are studied in regard to their preparation, solubilities, melting points, saponification, including separation of products. The ordinary vegetable and animal fats, including various commercial fat substitutes, are included in this study. Distinctions between the fats proper and the essential oils are drawn. Also the nitrogenized-phosphorized fat, lecithin, is separated from egg yolk and studied; cholesterin likewise.

The carbohydrates are next considered, and the principal divisions are studied in regard to solubilities; Fehling's test; Molish's test; behavior with iodine; behavior on heating; behavior with yeast; formation of osazones; behavior on hydrolysis.

The important types of the monosaccharides, of the disaccharides, and of the polysaccharides are studied. Starches from various vegetable sources are examined under the microscope, and the effect of heat both on the dry and on the moist substances is studied carefully. Glycogen is isolated from oysters and studied. Pectin is studied in fruit juices and its behavior with varying proportions of sugar observed.

In connection with the detailed study of each of the organic food principles, the chemistry of which is especially emphasized, practical applications of the experimental results are constantly discussed from the housekeeper's point of view.

Following these studies of the food principles, a careful study of each of the following food materials is taken up in order: Milk, meat, wheat flour.

In the study of milk its individual components are carefully separated and examined; tests for preservatives of milk are made; consideration is given to various milk dishes and to the various foods derived from milk.

Meat is studied through the preparation of water extractions and of ammonium chloride extractions, and the subsequent physical and chemical tests to which these extractions are subjected. Careful attention is given to the behavior of these solutions at various definite degrees of heat.

Meats are cooked both by boiling and by roasting, careful note being made both of the outer and inner temperatures at all stages of the processes. The results of these methods of cooking under various conditions are noted; subsequently, water extracts of the cooked meats are made, and these in turn are submitted to physical and chemical examinations. Broths and drippings obtained through these boiling and roasting processes are likewise subjected to examination. Creatine, creatinine, xanthine, and hypoxanthine are isolated and studied.

From all these experiments conclusions regarding the proper cooking of meats and the preparation of meat foods are drawn.

Wheat flour is next taken up. The wheat kernel is studied microscopically. Such physical tests as the following are made on a great variety of flours:

Color tests, cohesion tests, doughing tests, gluten tests, and fermentation tests. The student's knowledge of the simple proteins is increased through a separation of gluten into its components, gliadin and glutenin.

Finally, the bread-making qualities of various flours are tested through the making of breads by both short and long processes, these breads being subsequently rigidly criticized and scored.

Following this detailed laboratory work, each student chooses a short individual problem which she plans, works out in the laboratory, writes up, and summarizes orally at the time of the semester examinations. During the six weeks in which the students are working on their problems, weekly meetings of the class are held in which each student reports upon work so far accomplished, articles read, etc. Meanwhile, each student has opportunity as needed for individual conferences with the class teacher.

Some of the problems attacked by the class this semester are the following:

The relative economy of gas ovens.
The economics of chocolate and cocoa beverages.
Aluminum for cooking utensils.
The preparation of carp for the table.
Sugar in gelatin preparations.
The bacterial and acid content of buttermilk and other milk preparations.
Comparison of hard and soft flours in soft dough products.
Influence of moisture on the bursting of starch grains.
Comparison of baking powders.
Animal *v.* vegetable fats in cooking.
Influence of certain carbohydrates on growth.
The nutritive value of condensed and of malted milks.

It has happened in the past that the problem begun in course 4 has been so productive of results that it has been possible to continue the research, eventually working out a master's thesis.

From the foregoing outline of work done in course 4, it will be seen readily that the course seeks to familiarize the student with the physical, chemical, and physiological characteristics of the organic food principles. This is accomplished through a selection from the large body of experiments in "physiological chemistry of those which, in themselves or in their applications, have a more or less direct bearing upon the principles governing the selection and preparation of food."

Further, the course aims, through the search for and study of research articles, to extend the student's acquaintance with original sources of information; and, through the working out of a short but original problem, to test the student's power of independent thought and investigation.

NUTRITION AND DIETETICS—TEACHERS COLLEGE.

Prof. Mary Swartz Rose furnishes the following statement regarding courses in nutrition in Teachers College, Columbia University:

Home economics deals with three great fields—food, clothing, and shelter. Good nutrition is indirectly dependent upon clothing and shelter, but is primarily concerned with the food supply. Every course in cooking, marketing, and food sanitation should contribute to knowledge of nutrition; every course in food chemistry, physiology, and bacteriology has a direct bearing on its problems. But a well-balanced program must include a course in which these scattered contributions are coordinated, reinforced and extended along both practical and scientific lines. The better the student's training in science, the more advanced this course may be. If the fundamental laws of cell life and activity, the chemical constitution and properties of food materials, the physiology of human digestion and metabolism are well understood, and this knowledge is coupled with skill in the selection and preparation of food, the student is ready for training in scientific dietetics, that is, in the science dealing with the practical application of the general laws of nutrition to specific cases.

In Teachers College such a course is offered in the senior year to students who have already completed laboratory courses in biology, food chemistry, biological chemistry, and cooking. It is called Dietetics and includes lectures, recitations, and laboratory practice, but no sharp division is made between the different kinds of work. All go on in the same room, specially designed for the purpose, and accommodating 30 students at a time. Cooking tables of simple design are arranged in one-half of the space, and movable oak tables in the other half. The latter afford space for writing lectures and calculating dietaries, and setting out for inspection or consumption rations prepared at the cooking tables. Equipment is also provided for simple chemical experiments, and plenty of scales for weighing food materials.

Sherman's Chemistry of Food and Nutrition is used as a textbook in connection with the lectures, which deal with food in relation to digestion and metabolism in general, and with the specific problems of feeding in infancy, childhood, adult life, and old age. Emphasis is laid upon the nutrition requirements of the normal individual, pathological conditions being discussed only as they serve to throw light upon the underlying principles of nutrition and emphasize the importance of rational diet in the maintenance of health. Energy values of common food materials are studied on the basis of ordinary household measures and the 100-calorie unit. Practical school luncheons of definite fuel value and cost serve as an introduction to the more complex day's ration, which is made the unit for laboratory practice. Dietaries are prepared for individuals of various ages, and for typical family groups for specified sums of money. Rose's Laboratory Handbook for Dietetics provides detailed information in regard to the problems of dietary calculation and data upon food composition in convenient form. The aim throughout the course is to develop a scientific attitude toward the feeding problem, to impress the importance of accurate knowledge as a basis for sound judgment, and to give facility in selecting foodstuffs suitable in kind and amount to any given case without undue labor or expense.

Students interested in the problem of feeding large groups are offered, in addition to this course, one in dietary administration, in which dietaries for institutions of various kinds are studied, along with the practical problems of household organization, large quantity marketing, and business procedure.

For undergraduates who have not the scientific preparation for as technical a course as dietetics two others are given; one, called "elementary food economics," having no science prerequisites; the other, called "food and nutrition," requiring for admission a thorough course in general chemistry, or a shorter course in general chemistry and food chemistry. Both courses consist of lectures with laboratory work. Elementary food economics requires only half the time of the other courses and presents very simply and broadly the nutritive requirements of the body. In the laboratory, dietaries for individuals of different requirements are the main feature, with special emphasis on economic phases of the subject, the purpose being to guide the housewife, nurse, or elementary teacher to a very practical knowledge of the fundamentals of good feeding.

The food and nutrition course is intermediate in character between dietetics and elementary food economics. More time is allotted to the study of digestion than in any of the other courses, artificial digestion experiments, with preparation and identification of digestion products, being carried out pari passu with studies in the nutritive values and comparative cost of food materials. Calculations of the actual food consumption of the class for a day are made the starting point in dietary work, after which typical rations for typical conditions (of childhood, old age, emaciation, obesity, etc.) and for the family group are calculated and the food prepared and served in the laboratory. The general purpose is to give a clear conception of the body as a working machine; of food as the source of energy, building material, and body regulating substances; and of the way in which the materials are made available to the body.

Parallel with the course in dietetics, or following it, two courses are offered which extend the work in two directions. Nutrition and food economics, largely a lecture course with some supplemental laboratory practice, enables students to make a more intensive study of the principles of nutrition, and then consider in detail disorders, due to disturbances and disorders of nutrition, special dietaries for such conditions being worked out in the laboratory. Laboratory methods in nutrition, a course of the same length as that of nutrition and food economics, affords opportunity for first-hand study of some of the common methods of nutrition investigation. A special chemical laboratory, suitably equipped, is used in conneetion with the dietetics laboratory. Diets are calculated according to estimated individual requirement, the food prepared, sampled, and eaten, and analysis made of urine and feces to determine coefficients of digestibility, nitrogen balance, and special points of interest in connection with the problem in hand. The accompanying lectures treat of typical methods of studying digestion and metabolism, the main aim of the course being to give the student more concrete notions of the basis upon which the science of nutrition rests and some criteria for judging the relative value of various kinds of experimental evidence.

For students wishing to specialize still further in nutrition, two still more advanced courses are offered; one, a seminar, in which the field is reviewed in the light of recent contributions to the subject; the other, a research course in which special problems are assigned to individual students for investigation.

The department believes that in a school of home economics emphasis is fittingly laid on the human aspects of nutrition, and that not only chemistry and biology, but also psychology, economics, and sociology, must contribute their quotas to elucidate the principles involved in satisfying man's requirements for maintenance, efficiency, and happiness in so far as they can be satisfied by feeding.

PROBLEM COURSE—MICHIGAN AGRICULTURAL COLLEGE.

Prof. Agnes Hunt furnishes the following statement:

A course in "household problems and demonstrations" has been offered to senior women in the home economics department of the Michigan Agricultural College as an elective in the spring term. It requires six hours of laboratory work per week, and the work comprises the collecting of material and working out of an original problem with a demonstration of the results at the close of the term.

The course is organized not so much with the idea of perfecting a problem, as the time is too short for that, but rather to acquaint the student with ways and means of collecting material for herself, both from reference reading and experimental work. It has not been felt necessary to confine the work to this department alone, but has been found quite satisfactory to have the student carry on the problem study in a laboratory in some other department where equipment was more convenient. For example, one problem on the causes of shrinkage in canning fruits and vegetables was carried on in the bacteriological laboratory, where incubators, sterilizers, etc., could be handled quite easily. Another problem on deterioration of different kinds of dry and moist yeasts was worked on in the same department to determine how rapidly CO_2 was given off under varying conditions of age, temperature, etc. One problem on testing of bread flours was worked out in the new laboratory especially opened for such work in the chemistry department.

We have found that in some cases a group of two or three students working out different phases of the same problem have been able to accomplish better results than one student undertaking the whole field.

Some of the problems taken up in the last three years have been:

Effects upon freezing mixtures by using varying proportions of ice and salt.
Utilization of cheaper cuts of meat.
Comparison of various kinds of lunch baskets and lunches for same.
Comparison of flour, cornstarch, and egg as thickening agents.
A study of spring and winter wheat breads made from compressed yeast, yeast foam, and liquid yeast.
A study to determine the difference between the fireless and pressure cookers regarding cost, economy of time and labor, and the best results of the cooked material with reference to flavor and texture.
Utilization of dried fruits.
Various ways of using cheese.

TECHNICAL COURSES IN COOKERY.

The organization of instruction in the technique of cookery is well illustrated by the following titles of courses in the department of foods and cookery at Teachers College, Columbia University, offered separate from other courses in organic and household chemistry, biological chemistry, and nutrition and food economics: Technology of cookery—aiming to develop technique by studying principles, processes, materials; elements of cookery—a survey course for those not specializing in cookery; elementary food preparation—general principles; experimental cookery—the purpose of which is to put cookery on a scientific basis and to systematize methods, to emphasize the quantitative aspects, comparative recipes, costs—an undergraduate and a graduate course; home cookery and table service—study, planning, and cooking of breakfasts, luncheons, dinners, suppers, also table service; demonstration cookery—practice in public lectures and demonstrations in cookery, also in preparation of articles for publication; demonstrations in advanced cookery—more complicated processes, variety of flavorings, seasonings, and materials; cookery for social workers—problems of family at margin of subsistence, for visiting housekeepers, settlement workers, and others; cookery for invalids; institutional cookery—large-quantity cooking for hospitals, lunchrooms, restaurants; catering and general cookery—problems of tea rooms and catering establishments; and the history of cookery.

Section 5. COLLEGE COURSES IN TEXTILES AND CLOTHING.

Instruction in textiles and clothing is based on the principles of design. It involves social and economic considerations of importance. Certain aspects of the subject may be approached by the tests of the laboratory.

COURSES ON DRESS—OHIO STATE UNIVERSITY.

Miss Maud C. Hathaway furnishes the following statement:

The course in dress in Ohio State University covers a period of two years. One year's work is required of all first-year students in the home economics department. The rest of the work is elective at any time after the first year, and either a half year's or the whole year's work may be taken, as desired. Students taking first-year dress must also take a year of general design in the art department, two hours per week. Another half year of design is required before taking the advanced work in dress. Next semester we are to have for the first time a course in costume design, which we hope to have made a requirement of the dress course.

The first year's work consists of one laboratory period of two hours and a one-hour lecture period per week. In the laboratory cotton and linen are used in the making of undergarments, waists, and wash dresses. Hand and machine sewing are taught, and the use and adaptation of the commercial pattern. In the lectures the general subject of textiles is treated—the history and development of their manufacture; their chemical and physical properties. Finished fabrics are examined and studied for cost, quality, and use; economic and social problems related to the textile field are discussed; clothing budgets are prepared; and the care and the hygiene of clothing considered.

In the second year's work, laboratory periods of two hours each and a one-hour lecture period are required. In the first semester wool is the material used. Patterns are drafted and designed, and there is pattern modeling. Simple dresses are made. The lectures have thus far dealt largely with problems of design, but with the introduction of a course in costume design, the aim will be to try to relate the work in dress to as many important economic, social, and artistic problems as possible.

In the work of the fourth semester, silk dresses are made. Pattern modeling and designing are continued, and the use of the dress form introduced. In lectures an outline of the history of costume is given.

The general point of view in the instruction is that of the whole course in home economics—that is, it is an effort to make better home makers. Emphasis is laid particularly on those features of the clothing problem that will make the girl a wiser purchaser and consumer, both from the economic and the artistic standpoint. Her relation, as a home maker, to the social problems arising from this field of industrial work, as well as to something one may call, perhaps, the morality of dress, these are things we try to teach, rather than mere technical skill, though that is by no means neglected.

TEXTILE TESTING—TEACHERS COLLEGE.

The following statement regarding the work in textile testing as given in Teachers College, Columbia University, is furnished by the instructor, Ellen Beers McGowan. (See also "Textiles," Woolman and McGowan, Macmillan.)

The aim of the course is twofold:

1. To bring to the attention of the students standards in textiles and market conditions as affecting the consumer, leading to the question of the necessity for textile legislation.

2. To increase the student's ability to judge materials and to purchase wisely.

This aim is best accomplished by grouping the students in as small sections as possible, to allow for individual work. Each student in the group may, if she wishes, investigate any line of material in which she is interested. The results of each investigation are discussed and shared by all; so that if the section is made up of 15 students, each one has at the end of the course the nuclei, at least, of 15 studies of textile materials.

The following are a few of the questions which suggest themselves as the motives for these studies:

In this line of dress goods, ranging from 39 cents to $3 per yard, what can be considered the standard material? Is there a fixed relation of price to value?

Can the consumer depend upon the statement of the retailer as to the content of the material?

What should one pay for a serviceable grade of linen toweling, table damask, etc.? What are the claims of mercerized material as a substitute for linen damask?

How much is actual weave and quality concealed by dressings—in table linen, for example?

To what extent is cotton used as a substitute for linen and made to resemble it?

What is the relation of weighting to price and wearing quality in silks?

How can I increase the fastness of light-hued summer material to light and washing?

Materials selected for study may be: Dress and lining silks, waist and other flannels, mohairs, shepherd checks, novelty goods, serges, corded materials in wool and silk, linens, cotton material for sheetings, etc., upholstery goods, and many other lines of material.

Small pieces of material are bought, just sufficient for testing and dividing among the class as samples. The samples are mounted on cards, together with the results of the tests made, and other data.

The laboratory work consists of:

1. Microscopic study. The microscopic appearance of the important fibers is learned and applied to the identification and determination of quality of the fibers in the materials to be studied.

2. Chemical testing. Elaborate tests requiring much apparatus are avoided. Simple practical tests, many of which can be performed at home, are emphasized. Identification tests for all principal fibers and differentiation tests for combinations of materials are made, together with tests for mercerization, dressing, and weighting. These tests are applied, quantitatively when possible, to the particular studies of material.

3. Laundry. A brief time is devoted to the proper treatment of fibers in the laundry and to the fastness of colors and removal of stains.

4. Dyeing. Nothing of a technical nature is attempted. The emphasis is placed on learning the best class of dyestuff for a given material, which involves a discussion of classes of dyes, properties, and methods of application. Practice is given in mixing colors. After preliminary dyeing of skeins, the students apply their knowledge to the dyeing of cheesecloth for color effects, to tied work, to dyeing feathers, scarfs, ribbons, and dress materials.

COURSES IN TEXTILES AND CLOTHING—UNIVERSITY OF WISCONSIN.

The department of home economics furnishes the following statement regarding its courses in clothing and textiles:

Hand and machine sewing.—Given as a teacher's course in the summer school. Required as a prerequisite without credit for home economics 11 (next below). In either case it does not count in degrees toward graduation. It includes the making of all the fundamental stitches: Knitting, crocheting, darning, patching, and simple embroidery. The use of the sewing machine and its attachments. Fancy stitches done on the sewing machine. Practice in the drafting, cutting, and making of lingerie for ladies and children: Chemise, nightgown, drawers, corset cover, combination drawers and corset cover, silk and cotton petticoats, guimpes, shirt waists, flannel underwear, bathing suits, children's underwear.

Manufacture and selection of clothing.—Costume designing, economic problems of construction of clothing in the home, as compared to the commercial product, hygienic factors involved in clothing, and economic and sociological phases of the clothing industry.

Advanced dressmaking.—Laboratory work includes costumes: The drafting, cutting, and making of cotton dresses, woolen tailored suits (Peter Thompson style), fancy silk and crêpe dresses, tailored linen suits.

Millinery.—Aims to fit students for teaching millinery in the high schools; designing and drafting of patterns for hats; construction of frames; buckram covering; willow and wire covering, and finishing the hat with velvet, straws, etc.; making and placing of trimming; making of ribbons, flowers, and accessories of dress; renovating of millinery; children's millinery; baby bonnets; fur sewing, the making of muffs and collarettes.

Textiles.—Two lectures, three 2-hour laboratory periods per week, for one of which no credit is allowed.

The lectures cover, first, the study of the textile art in the early stages of civilization, illustrated by material gathered together in the historical museum; the progress of the industry through the period of the domestic system in Europe and America; the period of the industrial revolution, the study of expansion in recent years.

Second. The culture of the raw material of the textile fibers, the various machine processes necessary to the production of cloth, the bleaching, dyeing, printing, and finishing of cloth.

Third. The study of specialized parts of the industry, as the knitting industry, lace making, tapestry weaving, rug making, both domestic and foreign.

Fourth. Design and color in textile materials from the artistic standpoint; the possibility of securing an adequate label for purity in textile materials; the work of the consumers' league.

The laboratory work is devoted to learning the stitches and seams used in plain sewing; the parts, and the working of the sewing machine; the drafting and making of a shirt waist. The laboratory work includes:

First. Hand-loom weaving, from the processes of setting up a loom, making a warp, threading the loom, to the weaving of a rug and a table runner or bag.

Second. The study of the macroscopic characteristics of the principal textile fibers, their microscopic appearance, their physical and chemical properties and chemical composition; the problems of laundering, such as bleaching, shrinking, bluings, removal of stains, effect of detergents on the tensile strength.

Third. Dyes and dyeing.

Fourth. The study of weaves, qualities, prices and uses of different kinds of cloth; fluctuations in style.

Fifth. The analysis of cloth, macroscopic, chemical, strength tests, so as to enable the student to evaluate the quality and to detect adulterations.

General chemistry and household chemistry are required as prerequisites to the course.

COURSES IN TEXTILES, SEWING, DRESSMAKING—WASHINGTON STATE COLLEGE.

Prof. Agnes Houston Craig, of the Washington State College, furnishes the facts for the following statement:

The courses in textiles, sewing, and dressmaking have been planned so that students taking up this phase of home economics will approach their work in clothing and house furnishings from the viewpoint of individual income or of the family budget and its relation to general economic conditions; that they may appreciate the variety of interests involved in the work, giving each its proper valuation; and that they may attain to economic, technical, and artistic efficiency as regards clothing and household use of textiles.

A Survey Course in Textiles.

A general course in textiles should furnish a historic background of economic and artistic interest, so that the student may appreciate the social importance of the subject and intelligently relate past achievements with progress in all parts of the textile field. Either prerequisite or parallel to advanced work, there should be definite study in economics, translated into terms of domestic consumption, in sociology, and in industrial history.

I. HISTORICAL SURVEY. THE PART TEXTILE DEVELOPMENT HAS PLAYED IN CIVILIZATION.

1. Industrial Development Based upon Fundamental Needs: (*a*) Food; (*b*) shelter; (*c*) clothing.
2. Progress Based on Men's Genius for Invention: (*a*) Chronological development of textile machinery; (*b*) municipal development based on textile industry; (*c*) industrial revolution involving textile industries; (*d*) progressive development of textile manufactories—(1) family system; (2) guild system; (3) domestic system; (4) factory system.
3. Relation of Textile Development to Legislation: (*a*) Factory laws and legislation; (*b*) tariff regulation and legislation; (*c*) wage problems; (*d*) employment of women; (*e*) child labor laws; (*f*) social betterment movement.
4. Historical Significance of Fabrics as a Medium for Art Expression: (*a*) Oriental fabrics, rugs, and carpets; (*b*) tapestries; (*c*) embroideries and ecclesiastical needlework; (*d*) historic style traced through textile materials; (*e*) color, development of the dyer's art; (*f*) design and texture.

II. ECONOMIC INTERESTS.

1. Develop Economic Deductions from Historic Survey.
2. Textile Interests as They are Related to Agricultural Development: (*a*) Geographical distribution of raw materials; (*b*) transportation; (*c*) tariff.
3. Present Economic Status of Textile Industry: (*a*) Rank based on extent of employment and in amount paid in wages; (*b*) its rank in service next to food, steel, and iron.
4. Present Manufacturing Conditions Related to: (*a*) Cotton; (*b*) wool; (*c*) silk; (*d*) flax, hemp, and jute; (*e*) finished products—(1) ready-to-wear clothing and accessories; (2) household furnishing and equipment.

5. Effect of Constant Change in Fashions: (*a*) Viewpoint of commercial world; (*b*) viewpoint of consumer.

6. Economic Administration: (*a*) Relation of the family budget to the planning, purchasing, and construction of essentials in clothing and textile furnishings; (*b*) labor-saving devices and equipment related to textiles; (*c*) problems of public health and sanitation—(1) Manufactories—(*a*) sweatshops, etc.; (*b*) factory and workroom inspection; (*c*) child labor; (2) family interests—(*a*) textiles in their relation to personal hygiene; (*b*) textile furnishings and household sanitation; (*c*) laundry problems—(1) public laundry versus private enterprise; (2) hygienic advantages of home processes; (*d*) laundry economy from consumers' viewpoint—(1) relation of cost to budgets; (2) need and means of regulation of public laundries; (3) economy of the properly equipped home laundry and public laundries—(*aa*) comparative cost of operation; (*bb*) comparative results in service of fabrics.

III.—TEXTILE STUDY IS DISTINCTLY ECONOMIC IN VALUE AND AS SUCH SHOULD BE ATTACKED FROM TWO VIEWPOINTS.

1. Scientific: (*a*) Microscopic study—(1) properties and characteristics based on structure—(*a*) absorbability; (*b*) conductivity; (*c*) hygroscopicity; (*d*) tensility; (*e*) elasticity; (*f*) ductility; (2) structure as a means of identification; (3) final test for determining mixtures and the presence of adulterants; (*b*) chemical—(1) action of acids and alkalis on different fibers; (2) tests for identification of fibers; (3) principles of dyeing; (4) development of laundry theory based on—(*a*) structure of fibers; (*b*) reaction of acids and alkalis on fibers; (*c*) removal of stains; (*d*) fastness of color to light, cleansing processes, etc., wet and dry.

2. Artistic: (*a*) The expression of art principles as developed in textile design and harmonious color; texture; (*b*) textiles as a medium of art expression—(1) in house furnishing; (2) in clothing.

3. Technique: (*a*) Study of important processes of manufacture; (*b*) standard weaves and their classification into materials; (*c*) machinery equipment for home and laboratory use—(1) laundry equipment; (2) sewing machines, dress forms, etc.; (*d*) laundering, application of theory; (*e*) dry cleaning, application of theory.

IV. APPLICATION TO PRESENT SOCIAL CONDITIONS.

1. Through reduction of cost of living: (*a*) By exercise of scientific and artistic judgment in selection.

2. Through raising standard of living: (*a*) Wider economic independence; (*b*) happiness based on form of appreciation.

THE COURSE IN PLAIN SEWING.

The course in plain sewing, while giving necessary technique, is planned to direct ideas as regards fundamental facts of right living, stressing such subjects as economic consumption, art appreciation, hygiene and health conditions, and technical proficiency in relation to economic welfare. The same predominance of the idea element is evident in the course in dressmaking offered at Washington State College, which is outlined below.

COURSE IN DRESSMAKING.

I. HISTORIC TYPES RELATED TO MODERN STYLES.

II. ECONOMIC INTERESTS.

1. Ready-to-wear dresses versus homemade.
2. Relation of clothing interests to personal and family budget.
3. Health conditions.
4. Convenience and bodily freedom.
5. Service and durability.

A. SERVING TABLE, CAFETERIA IN HOME ECONOMICS BUILDING AT CORNELL UNIVERSITY, ITHACA, N. Y.

B. SEWING LABORATORY, HOME ECONOMICS BUILDING, IOWA STATE COLLEGE, AMES, IOWA.

A. DOMESTIC SCIENCE CLASS, TRAINING SCHOOL, UNIVERSITY OF UTAH, SALT LAKE CITY.

B. INSTITUTION LAUNDRY LABORATORY, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK, N. Y.

III. AESTHETIC PROBLEMS.

1. Standards of bodily proportions: (*a*) Ideal measurements, (*b*) variations and corrective methods.

2. Relation of art principles to dress: (*a*) Proportion through line, dark and light, etc., (*b*) harmony in color—(1) Contrasting harmonies, (2) analogous harmonies. (*c*) Type of human coloring—(1) Relation of color to type, (2) color tests demonstrating reactions on human coloring—(*a*) Complexion, (*b*) hair, (*c*) eyes.

IV. CLASSIFICATION OF TYPES, CORRECT USE OF EACH, EXAMPLES OF APPROPRIATE MATERIALS.

V. TECHNICAL CHARACTERISTICS OF EACH TYPE.

VI. SELECTION OF DESIGN.

1. Suitable to type.
2. Suitable to income.
3. Suitable to service.

VII. SELECTION OF MATERIAL.

1. Suitable to type and design.
2. Suitable to income.
3. Becomingness—(*a*) Texture; (*b*) pattern; (*c*) color.
4. Health considerations—(*a*) Age; (*b*) climatic condition; (*c*) constitutional requirements; (*d*) occupation.

VIII. TECHNIQUE.

1. Commercial patterns used as a basis: (*a*) Correct reading and adjustments of patterns; (*b*) free-hand alterations and adaptation of patterns; (*c*) correct and economical placing on goods depending—(1) width, right and wrong; (2) pattern, nap, checks, stripes, up and down; (*d*) cutting.

2. Modeling on the form: (*a*) Building design in paper or practice material so as to work out proportions, good line, effects in decoration; (*b*) union of parts previous to first fitting; (*c*) means of technical adjustment and alteration; (*d*) obtaining effects in placing of decoration.

3. Processes: (*a*) Seaming appropriate to type and material; (*b*) finishing—(1) Openings; (2) edges; (3) adjustments and means of closing; (4) application of trimmings and decorations; (*c*) some tasteful form of handmade trimming should be made—(1) Practice in applied design; (2) basis for comparison between cost of homemade and store trimmings; (3) puts both types at service of consumer.

The selection of actual types of dresses to be made must be determined by the instructor in consultation with her class. It is unwise to encourage the making of clothing that will be inappropriate to the circumstances and financial status of the individual. Each girl should be taught to dress tastefully and thus suitably to the environment. In most classes there are enough variations in such respects to give the entire class suggestion over a wide field. Each student should be required to work out the highest possible efficiency in her clothing at the lowest possible expenditure—(1) of money in purchase of material; (2) of time in shopping and technique; (3) of energy through adaptability to health conditions, reasonable time spent on technique, (4) wearing quality and care of material.

The results should give the maximum æsthetic satisfaction to the wearer. Such a course in dressmaking should include as widely varying types as possible. There is ample opportunity to put into effective practice the fundamental work in textile study.

TECHNICAL COURSES IN SEWING AND DRESSMAKING.

The organization of technical instruction in the sewing arts is well illustrated by the following titles of courses offered in Simmons College, Boston: Elementary sewing—plain hand and machine sewing; plain sewing—including drafting, cutting, plain hand and machine sewing for intending teachers; applied design—the design and color arrangements for household furnishings and garments; sewing—a condensed course, for students in advanced standing, in drafting, cutting, hand and machine work, textiles, and discussion of methods; millinery; dressmaking—drafting, fitting, draping, and finishing gowns; costume design—history of costume, proportions of human figure, and applications of principles of design to the gown and to the hat; industrial sewing—garment construction, power-machine stitching, and sewing for elementary and industrial schools; plain sewing—extensive practice in drafting, cutting, hand and machine work with attention to problems of elementary and secondary schools; textiles—fibers, processes of manufacture, identification and economic use of fabrics; textiles for students in salesmanship—colors, designs, qualities, textures, costs, durability.

Section 6. COLLEGE COURSES ON THE HOUSE—PLANS, DECORATION, SANITATION.

RATIONAL HOUSE PLANNING AND HOUSEHOLD DECORATION—CORNELL UNIVERSITY.

Prof. Helen Binkerd Young, architect and assistant professor of home economics in Cornell University, contributes the following statement:

Housing is one of the three fundamental divisions of home economics. In order that rational standards of housing may be developed, it is necessary to base the work on a study of the house plan and house structure. The time has come when we must realize that forceful and direct arrangements of floor plan do of themselves create conditions favorable to simple housework and to effective decoration; while crowded, rambling, or indirect arrangements create forms of waste that no amount of added equipment can cancel. Complete home economy can obtain only after the first great economy, that of the plan, is established. To accept dwellings of the day as fixed conditions is to limit the full demonstration of home economics. The organization of the house plan must be made to fit the organization of the housework.

Equally important is the equipping of the home with useful furniture and purposeful decoration. Every interior should be considered as a setting that may rest, delight, or uplift with its atmosphere. A room that yields nothing to its occupants is at least responsible for the sin of omission. The suggestive effect of various colors and forms on children as well as on adults is too valuable an educational force to be ignored. We need all the inspiration that a virile environment can diffuse. Daily life in such a home at length develops that personal poise which attends steady purpose and which becomes a staff to others as well as to oneself.

Such is the viewpoint pervading the course in house planning and household decoration given in the department of home economics at Cornell University. The course as at present scheduled covers three hours of credit a term, and runs throughout the junior year. The first semester is devoted to house planning and the second semester to decoration. Hereafter a two-hour course in design will be required as a prerequisite.

The course in house planning consists of two lecture periods of 50 minutes each and one laboratory period of 2½ hours. The lecture work presents to the students such discussions as, the relation of the house plan to homemaking, to the servant problem, and to the cost of living; economic versus cheap standards of building; developing house and grounds as a unit; exterior color schemes and building materials; and such phases of heating, plumbing, lighting, and general construction as effect one's standards of sound housing. It is the particular aim of this course to take a progressive view of housing, by discussing the use of new building materials, simpler plumbing methods, new floorings, and the effect such changes would have on the design, the upkeep, and the total economy of property. The bulk of the work is, however, a discussion of planning. A collection of lantern slides is used to illustrate various types of plans and exteriors both good and poor. Every plan is analyzed on the score of size, shape, arrangement, design, economy, and originality of treatment. Exterior views are analyzed for general proportion, method of roofing, window treatment, and general design of structural features. An appreciation of domestic architecture is thus developed.

The laboratory work in house planning consists of one copied and three original problems. A typical program of the three original problems includes:

1. The planning of a one-floor arrangement at a scale of ¼ inch to 1 foot. (Bungalow, apartment, or one floor of a two-family house.)
2. The planning of a two-floor arrangement at same scale. (A suburban house for a given site and for a family of given size, or a farmhouse.)
3. An economic kitchen plan. (This is the most detailed study of the term.)

The course in household decoration (three-hour course) consists of one lecture period of 50 minutes and two laboratory periods of 2½ hours each.

The work in decoration is fundamentally related to the work in house-planning. By designing rooms of agreeable proportions and by arranging windows, doors, fireplaces, and other structural features with relation to lines of composition on the plan so that they create or terminate vistas, there at once results an interior that is well-proportioned, effective, and decorative. A refined color scheme and serviceable furnishings will complete the requirements.

It is the particular aim of this course to train the individual to select and appreciate refined colors and appropriate furnishings.

An understanding of the principles of design and utility form the groundwork of this training. Definite interior problems in color, line, form, and arrangement are worked out by the students in the laboratory periods; these drawings are then hung and competitively judged. Throughout the work emphasis is laid on the elimination of the useless, and the economic value of a right environment.

Plans are now being made to expand both parts of this work in housing by continuing each part of the work throughout the entire year; an attempt will be made to keep problems in planning and in decoration running parallel to each other.

In conclusion, whatever compromises in housing the present conditions may temporarily impose on us, home economics should uphold the ultimate standard of a simple house, with garden attached, for every family in the land.

COURSE ON THE HOUSE—TULANE UNIVERSITY.

The department of home economics at the H. Sophie Newcomb College, Tulane University, New Orleans, outlines a four years' course of study on the house as follows:

A unit of free-hand drawing is prerequisite. The first year's work includes a general study of the house with textbook and supplementary lectures by specialists, one hour a week given by the domestic science department. The school of art of the university is to offer, parallel to this, four hours a week of related art work on the house, which is continued through the sophomore year, looking to the development of good taste as applied to the home, half of the time given to the study of design and half to form and color. The art principles are to be carried out in studio work in the construction of plaids, door panels, tiles, book-cover designs, applications to textiles, embroidery, and other household problems.

In the junior year a study of housing conditions in the city with field work and lectures is to be made in connection with the household management course in domestic science, and four hours a week of studio work in the school of art is devoted to house problems, on arrangement of rooms for convenience, harmony, and color, color schemes, lighting, woodwork, walls, floors, draperies, furniture design, furnishings, pictures, and household ornament. This art work is carried on through the senior year. An interesting part of the plan is the use of a building in which the art can be materialized in whole or part, working with such special problems as a model kitchenette, college infirmary, and social settlement, and the remodeling of old tenements.

COURSE IN HOUSE SANITATION—UNIVERSITY OF CHICAGO.

Prof. Marion Talbot, professor of household administration in the University of Chicago, contributes the following statement:

The course in house sanitation at the University of Chicago is offered to students who have had two years of college training. There are no prerequisite courses, and the work is given as a free elective, except in the case of students specializing in home economics, for whom it is specially recommended. Four hours a week for 12 weeks is the time devoted to the course. These facts suggest the reasons for the general point of view of the course and for the methods followed. The work is considered primarily in the light of its value in general training, and only secondary importance is attached to its technical aspects. The following aims are kept definitely in view, viz, acquisition of interesting and useful information, power of observation, sense of discrimination between essentials and nonessentials, intellectual freedom, and appreciation of scientific, economic, and social values. The method used involves the use of a textbook (Talbot's House Sanitation) with wide reference reading from standard works (especially Rosenau's Preventive Medicine and Hygiene) and periodical literature, lectures embodying new material not easily available for students, quizzes, reports on special reading (each student being responsible for articles on the medical, economic, social, municipal, legal, engineering, or bacteriological aspects of sanitation in the current numbers of some one special magazine), the critical analysis of popular and often pseudoscientific articles, reports on observed instances of insanitary practices, the solution of practical problems in sanitation, and a brief review of the leading contributions of scientific men to sanitary theory. Graduate students are given in addition a subject for special investigation and report. A good deal of emphasis is placed on the historical aspects of such topics as changes in the theories of ventilation and plumbing with the aim of showing the need of intellectual open-mindedness. Popular hygienic ideas and practices are shown to be erroneous or given a new justification on the basis of freshly discovered truths. The harmfulness of night air may be cited as an instance of one group and the value of sunshine as an instance of the other.

The ordinary subject matter of house sanitation lends itself very readily to treatment by this method. The site of the house, construction and care of the cellar, ventilation, heating, lighting, plumbing, sewage disposal, and furnishing are topics which come within the range of ordinary experience, and thus are peculiarly fruitful for educational discipline and training, especially when freed from their stereotyped setting.

The emphasis placed by the new public health on the person rather than on the environment as a factor in sanitation serves also to enrich the work. The next step is a natural one to take. The house should be considered not merely as a place where disease or ill health is controlled, but—what is of much greater importance—where the foundations of sound health are laid and vigor and vitality and resistance to disease are maintained. This larger view of the scope of house sanitation is emphasized at every possible point. It is even pointed out that standards of cleanliness may be enforced at such cost to comfort and convenience and happiness as to lower the power of the individual to resist disease when he is exposed to it. Every possible contribution which the house can make toward securing greater vigor on the part of the members of the household is considered a legitimate phase of sanitation.

Section 7. COLLEGE COURSES ON HOUSEHOLD MANAGEMENT AND RELATED SUBJECTS.

COURSE IN ELEMENTARY HOME ECONOMICS—UNIVERSITY OF KANSAS.

Mrs. Edna Day Hyde, late of the University of Kansas, established at the University of Missouri a few years ago an introductory "survey course in home economics" which introduced new students to varied problems in the different divisions of the field. A series of books covering the different divisions was used as texts.[1]

In the University of Kansas Mrs. Hyde developed an elementary course including five hours of work a week for freshmen and sophomores, which was divided in two parts, which might be taken together or separately. The first part of the course devoted three hours to preparation of foods; the second part, called elementary home economics, treated of the following topics:

1. History of home—Primitive, Greek and Roman, middle ages, colonial, modern. (Emphasis on division of labor between men and women with

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[1] General Survey Course in Home Economics for College Students. Edna D. Day. Proc. Tenth Lake Placid Conf. on Home Economics, 1908, 39 ff.

causes for changes.) Aim: (*a*) Cultural. Show relation of home to social and economic movements; connect with history and other college subjects. (*b*) Practical. Help girls to orient selves by showing: Women are naturally workers, cause of present leisure, fact and cause of late marriages, need of vocational training for girls.

2. Vocations open to women. Principles of selection.

3. Modern theories of what should be the work of married women.

4. Mome making a profession. Classified list of responsibilities of modern home makers.

5. Study of student bed room. Chosen as type, because of student's present responsibility for bed room and because of opportunity to show home problems as economic (time, energy, and money), sanitary, artistic, human.

6. Other problems: Each student studies and writes paper on some other individually chosen home problem.

7. Division of income. Student's income—estimate at first of year of expenses per month; monthly classified accounts handed in. Family income; brief discussion in class; may be one of special problems.

SURVEY COURSE IN HOME ECONOMICS—CORNELL UNIVERSITY.

The following outline describes a general or survey course in home economics which is offered to arts students in Cornell University who are not specializing in home economics. Three instructors cooperate in the instruction, which comprises three topics—food and dietetics, household management, and sanitation.

This is a six-hour course, with four lectures and two laboratory periods, and extends through a half year. The course is not designed for teachers, but for those who wish to understand the principles of housekeeping. Women elect the course which embraces foods, household management, and sanitation, with laboratory work; the men elect a three-hour course consisting of two lectures in foods and one food laboratory. A part of the lectures are given to men and women together; the laboratory work is separate.

Food and dietetics occupies two lecture periods of 50 minutes each and two laboratory periods of 2½ hours each throughout the second semester. The aim in this course is first to give fundamental principles of food selection and preparation, of household sanitation and household management, and to emphasize the opportunity of home experiments, so that the student may approach her home problems intelligently and enthusiastically. Only from this point of view can so short a course give much of value. Problems in dietetics, from infancy to old age, are particularly emphasized; so that the student may know how to select her own food, how to choose and select for others, and furthermore that she may contribute her intelligent interest in this subject which calls urgently for an enlightened public opinion.

Household management is taught in the food laboratory by actual practice and theoretically by means of household and personal accounting. The division of the family income; its apportionment for food, shelter, and clothing; the laws relating to family life; household, personal, and real property, and its care; the purchase, care, and preparation of food and clothing, and its preservation; the methods of conducting household work with a saving of strength, time, and money; labor-saving equipment with time studies; the economic position of woman as the home maker and the value of her household work as a business.

Household sanitation is to give a general view of the connection between sanitation and the health of the family, and to show the sources for information on questions of sanitation. Each student may, if she desires, make special application to city or to country problems, thus making the work more personal. The hygiene of rest, exercise, and general care of the health is considered.

COURSE IN HOME ECONOMICS—UNIVERSITY OF VERMONT.

Prof. Bertha M. Terrill furnishes the following statement:

The course in home economics at the University of Vermont aims to give emphasis to the importance of woman's work in administering the affairs of a household as a large factor in beneficial economic activity. It seeks to give a well-laid foundation, through some study of the historic development of family life in its social and economic aspects, for a rational consideration of its present status and a reasonable forecast of its best future development.

Effort is made to help the student to differentiate sharply between a haphazard existence without conscious purpose or direction, and a life intelligently controlled by a consistent standard of life. Detailed study of different phases of the profession is carried on with actual experience in managing and planning under local conditions so far as this can be arranged.

This course is offered to senior students after several prerequisite courses in foods, clothing, and shelter.

1. Economic status of the home.
    a. Production and consumption as divisions of political economy.
    b. The home as the former center of productive activity.
    c. Its present influence upon consumption.
    d. Economic function of woman as a director of consumption.
    e. Relation of education to wise production and consumption.
    f. Professional importance of home making.
2. Sociological aspects of the home.
    a. Historical survey of the development of family life.
    b. Present status.
    c. Forecast for future homes and family life.
    d. Ethical and moral importance of standards in home making.
3. Standards of living.
    a. Meaning and use of budgets.
    b. Study and comparison of actual budgets.
    c. Standardized budgets with reference to shelter, operating expenses, food, clothing, and higher life.
    d. Study of each division in detail in light of local conditions.
    e. At least one budget of given income for actual or suppositional family under local conditions.

4. Household accounts.
    a. Value in general.
    b. Possible methods.
    c. Comparative value and desirability of each.
5. Use of the bank.
    a. Entries, checks, indorsements of checks, vouchers, balancing, and other common details for understanding the use of an account.
6. Domestic service.

Using Prof. Lucy Salmon's Domestic Service as the basis of study, the class considers the various phases of this problem of the home.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY.

Technical courses in household management.—The division of subject matter in household management has been partially indicated by the curricula elsewhere (pp. 9, 18). A list of courses offered in this field at a single institution, Teachers College, will further illustrate the organization of technical instruction in management:

Housewifery—the kind of house service needed and the daily routine, discussions and laboratory work; domestic laundrying—for teacher or house manager, principles and processes; institution laundering—discussions and practice with power machinery; dietary administration—institution kitchens, dietaries for restaurants, hospitals, etc.; household economics—household budgets and control of family and personal life through economic relations, elementary and two graduate courses; household accounts; marketing—food supplies, buying, selection, tests, storage; household management—problems of the housewife in terms of scientific principles; housekeeping problems and practice; house structure; institutional organization and management—systems of administration, equipping, and upkeep, business direction; institution buying and dietaries; institution administration; institution accounts and office management; problems in household and institution administration—graduate course. Teachers College has recently issued a bulletin outlining the development of the management field.[1]

The course in home nursing.—Miss Isabel M. Stewart, of the department of nursing and health, Teachers College, furnishes the following statements, first as to methods of teaching home nursing and first aid, and second as to the course in home nursing:

I. Courses in home nursing and first aid are now being given in high schools in connection with physiology and hygiene, and domestic science; in normal schools and colleges in connection with domestic science and physical education; and also by separate agencies, night schools, Christian associations, industrial centers, settlements, Red Cross societies, boy scouts, camp fire girls, mothers' clubs, and other organizations. In a subject of such vital importance to life and health, every aspect of its teaching should have very serious consideration. It has been abundantly proven that "ill-chosen subject matter, poor teaching, and lack of sufficient foundation may lead to assumptions and consequences that are exceedingly dangerous. On the other hand, absolute ignorance of or popular fallacies about the care of sick people are even more fruitful of bad results. On the whole, it seems better to risk the evils incident to faulty instruction, rather than teach nothing at all."

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[1] Teachers College Bulletin. Opportunities in Household and Institutional Administration, School of Practical Arts, Teachers College, Columbia University, New York City, 1913.

The general aim of such courses is to enable women to care for themselves and others in such a way as to prevent illness, and maintain a high standard of health in homes, to care for slight illnesses where the services of a professional nurse are not required, and to enable everyone to act sensibly and intelligently in all accidents and emergencies that menace life. It is not any part of the aim to train women so that they can render cheap nursing service as attendants or so that they may feel competent to undertake the care and treatment of really sick people in the home. In teaching the various elementary nursing procedures, the purpose is not at all to develop a high degree of skill. This is not possible in a short time, and is not advisable. It is much more important to give pupils the right attitude toward disease, to make them appreciate the duty of prevention, the importance of the early recognition of disease, the bad economy of poor care, to create a respect for expert nursing and medical treatment, and a right conception of the amateur's place in the prevention rather than the actual care of sickness.

Home nursing in general should include the following topics:

1. Causes of diseases in the home; meaning of sanitary environment; importance of building up vital resistance.
2. Small deviations from health; the hygiene of illness in surroundings and care.
3. How to make people comfortable in bed and attend to their daily needs.
4. Symptoms of common diseases; importance of observation and early reporting; precautions regarding infectious diseases; importance of expert advice and treatment.
5. Methods of treatment which may be safely used for minor complaints or emergencies.
6. The care of children.

In elementary schools in England, in the educational work of the St. Johns Ambulance Association and the American Red Cross, it is a rule that a physician or nurse must be employed as teacher for home nursing and first aid. In American schools the teacher of biology, hygiene, physical education, or domestic science, with little or no special training or experience, has usually been called upon to give the instruction in these subjects. The specialist is urgently needed here, if such instruction is to be safely and skillfully given. It is unfair to demand of any untrained person that she should undertake responsibilities for which she is not prepared. The importance of procuring a physician or nurse as instructor arises from the skill and knowledge gained by wide experience and study, the interest and importance which he or she can lend to the subject, the confidence which is aroused in the student, the thorough acquaintance with the latest professional knowledge which such a person would be much more likely to possess. Nurses are rapidly coming into the schools as school nurses, and school physicians are being appointed in an increasing number of communities. Should it not properly be made part of the school nurse's duty to undertake such instruction? The services of nurses and physicians in a community may often be secured for voluntary talks or through part time employment. The opinion of the department of nursing and health is that the question of who shall give instruction and what shall be given is a matter of very great importance, in regard to which leaders in domestic science education must take a definite stand.

A very simple equipment for teaching home nursing can be obtained for $35 to $50, giving such a course as is outlined below (II). Such a course should be given in simplified form for high-school girls. In high schools first aid and sanitation might be taught to boys and girls together. In colleges such a course should be preceded by physiology, hygiene, and bacteriology, if these subjects are given. In normal schools home nursing should be taught for general information, but not to prepare teachers of home nursing. The reason for this is that it takes much more experience and training than could possibly be given in any short theoretical course to enable anyone to teach the subject satisfactorily. A laboratory is a necessary means of instruction, or at least a room for setting up beds and giving demonstrations; the room should have gas and water supply. Visits to a hospital, an almshouse, an orphanage, or a day nursery might form part of the observation work, but little can be seen of the actual care of sick or helpless people in this way.

II. The course in elementary nursing and first aid as given in Teachers College is a half-year course, three hours a week of lectures, demonstrations, and laboratory practice. It treats the following subjects:

Brief historical sketch of the conceptions of disease and care of the sick in ancient and modern times: The human body in its fight against disease; prevention of disease in the home; general provision for care of illness in and out of the home; early evidences of disease; observation and recording of symptoms; how to make a sick or injured person comfortable; bathing; food for the sick and convalescent. The treatment of disease: Use and abuse of medicines; some common remedies in simple inflammatory conditions; care of slight infectious ailments in the home; special points in the home care of sick children, the aged, chronics, and convalescents; emergency treatment of injuries to bony and muscular systems; injuries of skin and underlying tissues; injuries involving circulatory systems; injuries involving the nervous system; bandaging; emergency outfits.

HOUSEHOLD ECONOMICS JOURNALISM FOR WOMEN—IOWA STATE COLLEGE.

Prof. F. W. Beckman, professor of journalism in the Iowa State College, furnishes the following outline of two courses offered in journalism for women. These courses, Prof. Beckman states, were given in response to a request by the women students for an opportunity to fit themselves for journalistic work in home economics similar to journalistic work in agriculture, which had been provided the young men for a number of years. The college was also led to establish the courses because of its belief in their value. To be able to write in the journalistic or news style and to have a well-developed news sense are things valuable for themselves. Journalistic training for home-economics students would open a way to their becoming contributors to newspapers and magazines, thus increasing their income and opening a new field of useful service. The domestic science teacher who goes into a community and neglects to use the press as one means of education, was, it was felt, limiting her usefulness and her possibilities. So, too, the dietitian or social worker, and even the home worker, would find the newspapers a valuable ally. Again, training in home-economics journalism was deemed important because the newspapers and magazines need staff writers who are well trained in the science of home economics. The one qualification of the woman writer on the home in the newspaper or magazine has been a breezy and entertaining style rather than knowledge of the subject; and women's departments have therefore often contained vain and worthless stuff. The editors are ready for trained help in this field, it was felt, and so for the sake of the students, for progress in home science, and for better journalism it was felt that a duty rested upon the home economics department in such institutions as the State college to give young women some equipment in journalistic writing and some direction in this important field of labor.

Instruction in journalism at Iowa State College does not lead to a degree in journalism. The whole purpose of the courses is to give young women who are first trained in home economics some skill in writing upon home economics in the journalistic style. Consequently the courses in journalism are in a sense incidental. Two different courses are now offered: Beginning journalism for women and journalism practice for women. Each is a two-hour credit course, and the former is prerequisite to the latter. Young women who desire some further training may get it in a second year in connection with the actual editing and publishing of the Iowa Agriculturist, which adds women writers to its staff to conduct a department for farm women. For the staff of this publication two courses are offered in newspaper management, one hour per semester.

The course in beginning journalism for women deals with the fundamentals of journalistic writing. Because of the importance of the news sense and the news style, these subjects are given emphasis throughout the semester with practice in news gathering and news writing and the application of the principles involved in informational writing on home-economics topics.

In the first half of the first semester, the lectures develop the importance of news sense and news style in writing, make clear what is news and give standards of news values, point out the various sources of news in different fields and good news-gathering methods, set up the principles that govern the writing of the news story, describe the different types of news stories and how they are written, emphasize human interest and its value, and explain the news writer's qualifications and his viewpoint. In the second half, fewer lectures are delivered, because more time is given to practice. They deal with the application of news writing to home economics subjects; they point out and explain the many sources of home economics news; they discuss how information is to be gathered, selected, and written; how copy is prepared for contribution; and they give emphasis to the importance of accuracy, clearness, and conciseness.

Lectures early in the second semester present something of the history of women's journals in the United States, assist the students in a study of the purpose and standards of present-day journals, and seek to give them an understanding of the editor's needs. Later the lectures give guidance in the writing of different types of longer stories in news style, the feature story, and the magazine article. There are also talks on such qualities as originality, imagination, individuality, and their value in writing.

The study of news stories is conducted in two ways. The instructors present many illustrations, good and bad, in their lectures on news-story types and news writing, and the students clip examples for themselves as part of many assignments. These student clippings are thoroughly discussed in class, or in written exercises by the students themselves, and the discussion furnishes splendid opportunity for emphasizing essentials. In the second semester this phase of the work is continued in the clipping and discussion of good and bad examples of writing from women's journals. The clippings are all mounted on loose leaves and filed in the student notebooks for future reference and guidance.

In practice writing the student is kept busy throughout the course, because that is the great essential. When the assignments are short and require the writing of brief news stories, two or three such stories are required each week. Later, when the assignments are necessarily longer, only one each week is required, and finally, toward the end of the second semester, three weeks or more are allowed for the preparation of an article of considerable length. At first the assignments deal wholly with local news events that can be gathered conveniently, and they cover every possible type of news story. Later the assignments comprise the writings of home-economics stories. Always it is insisted that these stories must deal with fact, experience, or information that may be secured by the student directly at first hand. The student is not allowed to write about things that are remote, nor to indulge in the presentation of information that is wholly theoretical; the story must deal with things that "happen" in the field of home economics, the news of home economics.

Criticism is given upon every assignment and as fully as possible. Sometimes a part of each session is given to criticism; sometimes all of occasional sessions. As often as time will permit, consultation and criticism in the instructor's office are resorted to. This is especially true in the second semester's work.

RURAL-EXTENSION TEACHING—NEW YORK STATE COLLEGE OF AGRICULTURE, CORNELL UNIVERSITY.

A course in methods of rural-extension work in home economics is given by Prof. Martha Van Rensselaer in the department of home economics at Cornell University. Its purpose is to acquaint students with the problems of the farm community and to give some preparation for extension work in this field. Training in home economics in many institutions must necessarily be from the city point of view, since the laboratories offered for practical work are in cities and larger towns. Colleges of agriculture have larger opportunity for rural laboratories. The following principles are urged at the beginning of the course:

(*a*) Improvement of the farm home is a part of rural progress and demands scientific instruction.

(*b*) More varied instruction is needed for farm women than for other housekeepers, since the farm work comprises all forms of household work.

(*c*) Everyone is dependent upon the careful application of the principles of production and distribution of which the farmer's wife has a large control. The health and welfare of any community depends upon the instruction of farm women. Therefore, the State is justified in making appropriations for extension instruction for the farm home.

(*d*) Farm-home extension is not a field for philanthropy. The best teaching ability and educational methods should be directed to it.

The class is instructed in methods of presentation before audiences, subject matter, preparation of outlines, public speaking, and use of good English.

The laboratory is made up of rural schools within a few miles of the university and of study clubs desiring lectures and demonstrations. Contests are held in the rural schools to encourage a study of domestic science and to give a field for extension practice. For example, a lesson is given in a rural school in bread making by a student in the extension class. Pupils are requested to practice at home and bring their bread to the schoolhouse, to be judged when some members of the class go to the school to judge the bread. Prizes are offered for the best loaves of bread and for the best description of wheat growing and bread making. Correlated subjects are treated wherever possible. In the bread contests a student presents the bread-making lesson; another student gives a talk upon wheat growing. Frequently there are members of the class who have taken courses in the agricultural college and are capable of giving a lesson in the growing of various products. Thus, in an afternoon's presentation, drawing, spelling, English, geography, arithmetic, history, and sometimes physiology are all taught by means of the lessons in domestic science and agriculture.

An advanced course of special problems is given to students who have taken the course in rural extension. They are allowed to go to schools and to meetings of organizations to present demonstrations and lectures which have been approved by an instructor.

III. DATA ON COLLEGE INSTRUCTION.

Section 1. COLLEGES GIVING INSTRUCTION IN HOME ECONOMICS.

Some 252 colleges are, in 1914–15, giving instruction in home economics. Of these colleges, 99 presented detailed statements in 1912–13 of their instruction in this field, and these detailed returns are presented in Table 1; analyzed statistically these detailed returns form the basis of the discussion of college instruction which follows. It is to be borne in mind that this statistical study of the curricula and activities of the colleges and universities is necessarily based on the limited number of schedules returned by colleges and reported in Table 1. In order to exhibit more completely the work in colleges and universities, the list of all institutions reporting such instruction is entered at the close of the detailed table (p. 68), and is followed by a list of 43 colleges which, while not offering distinctively home economics courses, do offer applied science courses having reference to the home.

TABLE 1.—*Nature of college instruction in home economics in 99 institutions, by colleges.*

Names and locations.	Year introduced.	Course of study includes home economics and college subjects.	Length of such course, in years.	Leads to degree, diploma, or certificate.	Registration in such course.	Number of women in college.	Number preparing to teach home economics.	Courses available to prepare teachers of home economics.						Number studying home economics for general utility.	Number preparing for administration positions (dietetics, management, etc.).	Special equipment.	Value: "b.," of buildings; "l.," of laboratories.	Publish popular bulletins on home economics.	Give correspondence instruction in home economics.	In effect, bureau of information.	Sends lecturers to farmers' institutes.	Home economics "moving schools."	Housekeepers' conferences.	Short courses.
								History of education.	Educational psychology.	General methods of teaching.	Methods of teaching home economics.	Practice teaching of home economics.	Amount of practice teaching required.											
Woman's College of Alabama, Montgomery, Ala.	1902	×	4	A. B.	25	185	2	(1)	×	×	×	Sen. yr.	5 mos.	23	(?)	×	l., $1,000							
Central College, Conway, Ark.		×	2		12	185	3		×	×				12		×	l., 250							
Mills College, Mills College, Cal.	1905	×	4	B. S.	45	135	35	×	×	×	×	×	15 less.	9	1									
Colorado Agricultural College, Fort Collins, Colo.	1896	×	4	B. S.				×	×	×	×	×	5 hrs. 1 sem.			×		×	No.		×	×	×	×
Florida State College for Women, Tallahassee, Fla.	1894	×	4	B. S.	50	400	8	×	×	×	×	×	30 less.	600		×		(1)		×	×	1	×	×
Brenau College, Gainesville, Ga.		×																						
Athens College, Athens, Ga.	1906	×	2	Cert.	25	84	1				×	No.		24	(?)	×								
Atlanta University, Atlanta, Ga.								×	×				(2)				l., 7,500							
Southern Female College, La Grange, Ga.	1908					127		×	×	×				30										
College of Hawaii, Honolulu, Hawaii.	1898	×	4	B. S.	2	126								30		×	l., 1,000		×			×		×
University of Idaho, Moscow, Idaho.	1897	×	4	B. S.	40	190	40	×	×	×	×	×	(3)	110		×	l., 2,500			×	×	×	(4)	×
Lewis Institute, Chicago, Ill.		×	4	B. S.	150	200	150		×	×	×	×	(5)	10%	10–15 yr.	×	l., 10,000– l., 15,000							
University of Chicago, Chicago, Ill.			4					×	×	×	×	×	Varies.			×			×					
James Milliken University, Decatur, Ill.		×	4	B. S.	125	250	20	×	×	×	×	×					b., 31,000				×			
Lombard College, Galesburg, Ill.	1912	×	4	B. S.	31	62	16					×	2 sems.	15		×	l., 650			×	×		×	×
Illinois Woman's College, Jacksonville, Ill.	1906	×	4 2	B. S. Cert.	12 29	350	30	×		×	×	×	(6)	35	2	×	l., 800				×			
McKendree College, Lebanon, Ill.		×	2–4	Cert. B. S.	40	72	16					×	6 weeks.	20	4	×	l., 2,000			×	×			×
Lincoln College, Lincoln, Ill.		×	4	B. S.	40	69	10	×	×					30		×	l., 3,000				×		×	

[1] Planned.

[2] 2 hours a week for 4 months.

[3] 2 periods a week for 1 year.

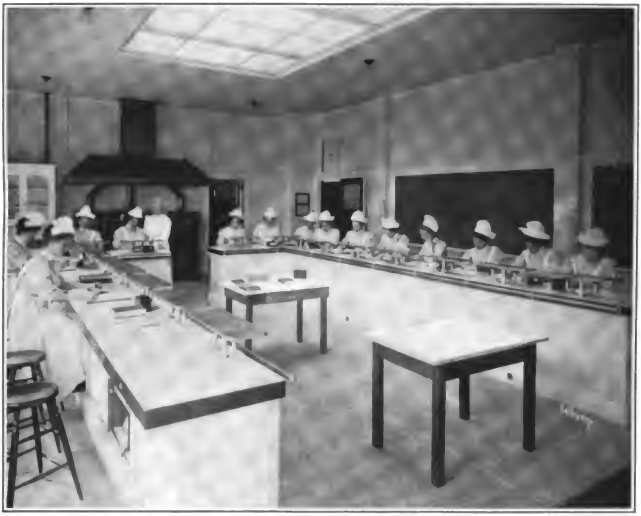
[4] Not yet.

[5] 6 months in settlements, etc.

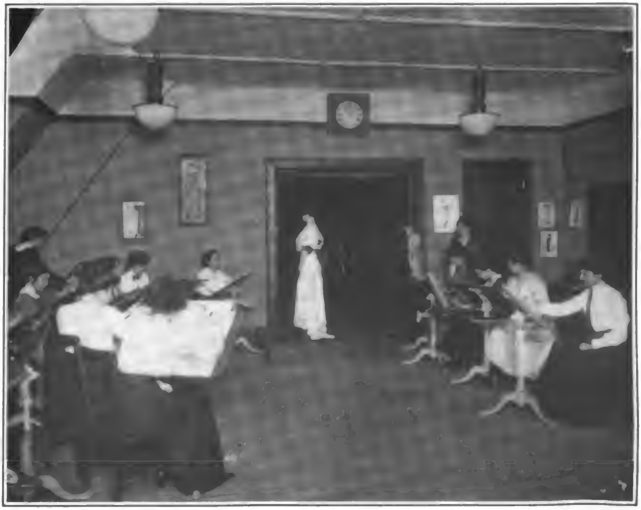
[6] One-half year each in cookery and serving.

TABLE 1.—*Nature of college instruction in home economics in 99 institutions, by colleges*—Continued.

Names and locations.	Year introduced.	Course of study includes home economics and college subjects.	Length of such course, in years.	Leads to degree, diploma, or certificate.	Registration in such course.	Number of women in college.	Number preparing to teach home economics.	Courses available to prepare teachers of home economics.						Number studying home economics for general utility.	Number preparing for administration positions (dietetics, management, etc.).	Special equipment.	Value: "b.," of buildings; "l.," of laboratories.	Publish popular bulletins on home economics.	Give correspondence instruction in home economics.	In effect, bureau of information.	Sends lecturers to farmers' institutes.	Home economics "moving schools."	Housekeepers' conferences.	Short courses.
								History of education.	Educational psychology.	General methods of teaching.	Methods of teaching home economics.	Practice teaching of home economics.	Amount of practice teaching required.											
Frances Shimer School of University of Chicago, Mount Carroll, Ill.	1913	×	2	...	...	...	...	...	...	...	...	...	...	15	...	×	b., ½, 19,000	...	...	...	...	...	...	...
Rockford College for Women, Rockford, Ill.	1906	×	3–4	B. A. B. S.	...	...	(1)	×	×	×	×	×	(2)	...	...	×	...	...	...	...	×	...	...	...
University of Illinois, Urbana, Ill.	1874 1900	×	4	A. B. B. S.	305	800	(3)	×	×	...	×	×	...	¼	¼	×	...	...	...	×	×	×	×	×
Purdue University, Lafayette, Ind.	1905	×	4	B. S.	121	174	(4)	×	×	×	×	×	(5)	...	...	×	l., 5,000	×	...	...	×	×	×	×
Earlham College, Earlham, Ind.	...	×	1	...	44	...	4	×	×	×			...	40	...	×	l., 600	...	...	...	...	...	...	...
Iowa State College, Ames, Iowa.	1872	×	4	B. S.	380	420	(6)	×	×	×	×	×	12–20 weeks.	...	[6] 28	×	b., 53,000 l., 8,000	×	...	×	×	...	...	×
Iowa State Teachers' College, Cedar Falls, Iowa.	...	×	4	B. A.	2	1,079	(7)	×	×	×	×	×	1 term, 12 wks.	2	1	×	l., 500	...	...	...	×	...	...	...
Coe College, Cedar Rapids, Iowa.	1912	×	...	B. S.	54	141	...	×	×	×	×	×	lab. a wk.	...	...	×	l., 700	...	...	...	...	...	...	...
Lenox College, Hopkinton, Iowa.	...	×	2	B. S. or A. B.	12	...	...	×	×	...	...	...	(12)	...	...	...	...	...	...	...	...	...	...	...
Penn College, Oskaloosa, Iowa.	...	...	...	...	80	150	...	×	×	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Leander Clark College, Toledo, Iowa.	1912	×	4	B. S.	36	78	6	×	×	×	×	×	1 yr.	32	...	×	l., 450	...	...	...	...	...	...	...
Kansas State Agricultural College, Manhattan, Kans.	1873	×	4	B. S.	580	625	⅓	×	...	×	×	×	(9)	⅓	Few.	×	b., 70,000 l., 13,000	...	×	×	×	×	×	×
Washburn College, Topeka, Kans.	1911	...	...	...	...	242	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Fairmont College, Wichita, Kans.	...	×	4	A. B.	24	120	2	×	×	×	×	×	(10)	22	...	×	l., 600	...	...	...	...	...	...	...
State University of Kentucky, Lexington, Ky.	1910	×	4	B. S.	50	230	25	×	×	...	...	...	...	25	...	×	l., 2,000	...	...	×	×	×	×	...
H. S. Newcomb Memorial College for Women, New Orleans, La.	...	×	2–4	Cert. B. S.	40	450	40	×	×	×	×	×	(11)	15	...	×	l., 3,000	...	...	...	...	...	...	...
Bates College, Lewiston, Me.	1911 1912	...	...	...	...	170	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
University of Maine, Orono, Me.	1909	×	4	B. S.	14	71	14	×	×	×	×	×	16 les.	15	...	×	l., 1,050	...	×	...	...	...	×	...



A. CLASS IN DIETETICS, SENIOR LABORATORY, HOME ECONOMICS BUILDING, IOWA STATE COLLEGE, AMES, IOWA.



B. SKETCHING FROM MODEL IN THE COSTUME DESIGN STUDIO, TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK, N. Y.

A. HOME ECONOMICS AND AGRICULTURAL DEMONSTRATION TRAIN, COLORADO AGRICULTURAL COLLEGE, FORT COLLINS.

B. FOOD PREPARATION LABORATORY, FLORIDA STATE COLLEGE FOR WOMEN, TALLAHASSEE.

Hood College, Frederick, Md.	1907	×	3		31		20	×	×	×	×	×	4-6 les.	11		×	l., 500– l., 1,000							
Maryland College for Women, Lutherville, Md.	1909	×	2	B. S.	12	103		×	×							×								
Simmons College, Boston, Mass.		×	4	B. S.	393	959	314		×	×	×	×	(12)	60	20	×								
Wheaton College, Norton, Mass.		×	4	B. A.	82	185		×	No.	×	No.	No.	None.	82	No.	×	l., 1,200							
Michigan Agricultural College, East Lansing, Mich.	1897	×	4	B. S.	272	279	50– 75	×	×	×	×	×	2 weeks.	200	15-20	×	b., 95,000 l., 10,300			×	×		×	
Hillsdale College, Hillsdale, Mich.		×	2	Cert.	49	260	12	×	×	×		×	(13)	37	1	×	l., 800							
Albert Lea College, Albert Lea, Minn.		×	2	Dip.	15	120	15	×	×	×	×	×	1 yr.	7		×	l., 2,800				×		×	
University of Minnesota, Dept. of Agri., Minneapolis, Minn.	1902	×	4	B. S.	177	177		×	×	×	×	×	1 yr.			×	b.l., 90,000	×			×	×		×
Rust University, Holly Springs, Miss.							4				×	×	4 mos.	108										
Synodical College, Fulton, Mo.		×	2		18	125	3		×					15		×	l., 600							
Lexington College for Women, Lexington, Mo	1912	×	2	B. S.	14	132	4	×	×	×	×	×	(14)	10	2	×	l., 400							
Forest Park University, St. Louis, Mo.	1913	×	2-4		14	35								8		×								
University of Missouri, Columbia, Mo.	1901	×	4	B. S.	2[illegible]– 225	600– 700	60– 70	×	×	×	×	×	(15)	590			l., 3,000	×	×		×	×	×	×
Montana State College of Agr. and Indus. Arts, Bozeman, Mont	1894	×	4	B. S.	47	108		No.	×	No.	×	×	(16)			×	l., 3,500			×	×		×	
Bellevue College, Bellevue, Nebr	1909													20		×	l., 75							
University of Nebraska, Lincoln, Nebr.	1898	×	4	B. S.	130	130	25– 40	×	×	×	×	×	18 wks.	25– 50	Few.						×	×	×	
State College of Agr. and Mech. Arts, State College, N. Mex		×	4	B. S.	50	60	8		×			×		52		×	l., 1,150				×		×	
Alfred University, Alfred, N. Y.														40		×	l., 1,300				×		×	
St. Lawrence University, Canton, N. Y	1907	×	2		55	150	55		×			×				×	l., 5,000						×	
Elmira College, Elmira, N. Y	1911	×	4	B. S.	35	207	15	×	×	×	×	×		20	15									
William Smith College, Geneva, N. Y.	1912	×	4	B. S.	3		3	×	×	×				13		×								
Cornell University, Ithaca, N. Y	1908	×	4	B. S.	150		½	×	×	×	×	×	(17)		(18)	×	b.l., 185,000	×	×		×	×	×	×
School of Practical Arts, Teachers College, New York, N. Y.	1888	×	4	B. S.	261		½	×	×	×	×	×			84	×	b.l., 448,000	×			(19)			
Hunter College of City of New York, N. Y.	1903					1,338		×	×	×														×
Salem Academy and College, Winston-Salem, N. C.		×	4	Cert.			3		×			×	(20)	65	3	×	l., 600							
North Dakota Agr. College, Agricultural College, N. Dak.	1890	×	4	B. S.	76	224	67	×	×	×	×	×	1 yr.		9			×		×	×		×	×
University of North Dakota, University, N. Dak.	1910	×	2-4	Cert. B. A.	52	334	24	×	×	×	×	×		few.							×			
State Normal College of Ohio University, Athens, Ohio	1910	×	2	Dip.	130	370	30	×	×	×	×	×	110 hrs.	100	10	×	l., 5,000				×		×	×
Defiance College, Defiance, Ohio	1910	×	4	A. B.				×	×	×	×					×	l., 5,000							
Muskingum College, New Concord, Ohio	1912				6	106										×	l., 250						×	
Miami University, Oxford, Ohio		×	2	Dip.	35	320	35	×	×			×	100 hrs.			×	l., 1,000				×			

[1] 80 per cent.
[2] 20 double periods.
[3] 20 of 30 seniors.
[4] Nearly all.
[5] No definite amount.
[6] 28 in senior class.
[7] 131 in special course.
[8] 12 weeks, 1 lesson a week.
[9] 1 semester, 2 hours a week.
[10] 2 lessons, 20 observations.
[11] 1 hour a week for 2 years.
[12] 1 laboratory a week.
[13] 18 weeks, 1 period a week.
[14] 5 months, 1 hour a week.
[15] 5 to 10 hours for 16 weeks.
[16] 2 a week for one-half year.
[17] 1 period a week for term.
[18] Occasionally.
[19] 2 periods of 45 minutes.
[20] 15 to 20 per cent.

TABLE 1.—*Nature of college instruction in home economics in 99 institutions, by colleges*—Continued.

Names and locations.	Year introduced.	Course of study includes home economics and college subjects.	Length of such course, in years.	Leads to degree, diploma, or certificate.	Registration in such course.	Number of women in college.	Number preparing to teach home economics.	Courses available to prepare teachers of home economics.						Number studying home economics for general utility.	Number preparing for administration positions (dietetics, management, etc.).	Special equipment.	Value: "b.," of buildings; "l.," of laboratories.	Publish popular bulletins on home economics.	Give correspondence instruction in home economics.	In effect, bureau of information.	Sends lecturers to farmers' institutes.	Home economics "moving schools."	Housekeepers' conferences.	Short courses.
								History of education.	Educational psychology.	General methods of teaching.	Methods of teaching home economics.	Practice teaching of home economics.	Amount of practice teaching required.											
Ohio State University, Columbus, Ohio	1896	×	4	B. S.	410	850	300	×	×	×	×	.....	10–20 les.	....	[1] 100	×	l., 3,793	×	.....	....	×	×	×	....
Oxford College for Women, Oxford, Ohio	.....	×	2–4	B. A.	44	182	18	×	×	....	×	×	20 wks.	26	.....	×	.....	.....	.....	....	....	....	....	....
Western College for Women, Oxford, Ohio	1902	×	4	A. B.	60	234	....	×	×	....	....	.....	.....	55	.....	×	l., 500	.....	.....	....	×	....	....	....
Lake Erie College, Painesville, Ohio	1898	....	....	A. B.	103	....	....	×	×	....	....	.....	.....	....	.....	×	.....	.....	.....	....	....	....	....	....
Oklahoma Agr. and Mech. College, Stillwater, Okla.	1900	×	4	B. S.	224	332	25	×	×	×	×	×	2 terms.	50	.....	×	b., 62,000 l., 5,878	×	.....	×	×	×	×	×
Oregon Agr. College, Corvallis, Oreg.	1888	×	4	B. S.	280	365	50	×	×	×	×	×	(2)	230	1	×	b., 60,000 l., 4,000	×	×	×	×	×	×	×
Allentown College for Women, Allentown, Pa.	1910	×	2	.....	27	70	1	....	....	....	....	.....	.....	26	1	×	l., 100	.....	.....	....	....	....	....	×
Blairsville College, Blairsville, Pa.	1910	×	2	.....	4	80	4	....	....	....	....	.....	.....	13	.....	×	.....	.....	.....	....	....	....	....	....
Temple University, Philadelphia, Pa.	1894	×	2–4	B. S.	29	343	19	×	×	×	×	×	4 mos.	20	10	×	l., 550	.....	.....	....	×	....	....	×
Carnegie Institute of Technology, Pittsburgh, Pa.	1912	×	4	B. S.	104	575	80	×	×	×	×	×	102 hrs.	150	10	×	.....	.....	.....	....	×	....	....	....
Pennsylvania State College, State College, Pa.	.....	×	4	B. S.	60	72	5	×	×	×	×	×	1 yr.	....	.....	×	b., 25,000	.....	×	×	×	×	×	....
Rhode Island State College, Kingston, R. I.	.....	×	4	B. S.	25	29	....	×	×	×	×	.....	.....	....	.....	×	l., 2,000	.....	.....	....	×	....	....	×
Lander College, Greenwood, S. C.	1911-1912	×	3	Cert.	35	206	15	....	×	....	×	×	(3)	20	.....	×	l., 450 500	.....	.....	....	....	....	....	×
South Dakota College of Agr. and Mech. Arts, Brookings, S. Dak.	1887	×	4	B. S.	150	175	25	×	×	×	×	×	(4)	125	.....	×	l., 2,000	.....	.....	×	×	....	....	×
Lincoln Memorial University, Cumberland Gap, Tenn.	1911	.....	1	.....	....	....	....	....	....	....	....	.....	.....	9	.....	×	l., 150	.....	.....	....	×	....	....	....
Carson-Newman College, Jefferson City, Tenn.	.....	×	4	.....	....	150	4	×	×	×	×	.....	.....	41	.....	×	.....	.....	.....	....	....	....	....	....

University of Tennessee, Knoxville, Tenn.	1902	×	4	A. B.	90	126	30	×	×	×	×	...	...	...	...	×	l., 2,700	...	...	×	×	...	×	...
Fisk University, Nashville, Tenn.	1912	×	6	Cert.	8	172	8	×	×	×	×	×	1 yr.	8	8	×	...	...	...	...	...	...	...	...
University of Texas, Austin, Tex.	1912	...	...	A. B.	176	695	60	...	...	×	×	×	1 yr.	116	...	×	l., 3,000	×	×	(5)	×	×	×	...
State College of Industrial Arts for Women, Denton, Tex.	...	...	...	B. S.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
State Agricultural College, Logan, Utah.	1890	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Normal School of University of Utah, Salt Lake City, Utah	1909	×	4	B. S.	6	462	6	...	...	×	×	×	(4)	100	...	×	l., 800	...	...	...	...	...	...	...
University of Vermont, Burlington, Vt	1908	×	4	B. S.	...	98	14	×	×	×	×	×	...	19	...	×	l., 1,700	...	...	...	×	...	×	×
Middlebury College, Middlebury, Vt.	1911	...	3	...	18	150	9	×	×	×	×	×	1 sem.	8	1	×	l., 895	...	...	...	...	...	...	...
Virginia College, Roanoke, Va.	1909	×	2	Cert.	25	110	10	...	...	...	...	×	...	15–20	...	×	...	...	...	...	...	...	...	...
Sweet Briar College, Sweet Briar, Va.	1910	...	...	...	...	...	...	...	...	...	...	...	...	...	...	×	l., 500	...	...	...	...	...	...	...
State College of Washington, Pullman, Wash.	1892	×	4	A. B. B. S.	89	...	(7)	×	×	...	×	...	...	69	...	×	b., 40,000	...	...	×	×	...	...	×
University of Washington, Seattle, Wash.	1908	×	4	A. B. B. S.	110	918	...	×	×	×	×	...	...	...	...	×	b., 5,500 l., 1,019	...	×	...	...	...	...	...
University of Puget Sound, Tacoma, Wash.	...	×	4	B. A.	28	109	10	×	×	×	×	×	1 term.	18	...	×	l., 800	...	...	...	...	...	...	...
University of West Virginia, Morgantown, W. Va.	1899	×	4	A. B. B. S.	34	100	...	...	...	×	×	×	6 les.	20	...	×	l., 2,000	...	...	...	×	...	...	×
Milwaukee-Downer College, Milwaukee, Wis.	1901	×	2–4	Dip. B. S.	...	321	91	×	×	×	×	×	(9)	...	...	×	b., 17,000	...	...	...	×	...	...	...
University of Wisconsin, Madison, Wis.	1903	×	4	B. S.	168	...	...	×	×	×	×	×	(8)	200	3	×	...	...	×	×	×	×	×	×

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[1] Approximately.
[2] 4 hours a week.
[3] A few weeks.
[4] 4 weeks, 6 hours a week.
[5] Arranging one.
[6] 5 hours per week.
[7] 75 per cent.
[8] 2 hours per week for 1 year.
[9] Part of semester.

COLLEGES TEACHING HOME ECONOMICS, 1914–15.

The following list includes the 252 colleges and universities which are teaching home economics in 1914–15, and 5 additional institutions which are to begin such instruction in 1915–16—that is, 257 colleges in all; those colleges for which detailed statements are given in Table 1 are indicated by an asterisk (*); for some of the institutions the year is given in which the home economics course was introduced. Of the approximately 450 colleges and universities in the United States which receive women students 257, or 57 per cent, are therefore giving, or are soon to be giving, courses of instruction in home economics.

Alabama Polytechnic Institute, Auburn, Ala.—In summer session only.
*Woman's College of Alabama, Montgomery, Ala. 1902.
University of Arizona, Tucson, Ariz. 1913–14.
*Central College, Conway, Ark.
University of Arkansas, Fayetteville, Ark. 1913–14.
University of California, Berkeley, Cal. 1909.
*Mills College, Mills College Post Office, Cal. 1905.
Whittier College, Whittier, Cal.
University of Colorado, Boulder, Colo. Summer school, 1914; department planned.
Colorado Woman's College, Denver, Colo.
*Colorado Agricultural College, Fort Collins, Colo. 1896.
State Teachers College of Colorado, Greeley, Colo.
Connecticut Woman's College, New London, Conn. Department when college opens in 1915.
Connecticut Agricultural College, Storrs, Conn. Two-year college course, 1913; extension work.
Delaware Woman's College, Newark, Del. 1914–15.
Gallaudet College, Washington, D. C.—Experimental course, 1915–16.
Howard University, Washington, D. C.—Four-year B. S. course.
Trinity College, Washington, D. C.—Noncredit courses in cooking and foods.
*Florida State College for Women, Tallahassee, Fla. 1894.
*Athens College, Athens, Ga. 1906.
*Atlanta University, Atlanta, Ga.
Agnes Scott College, Decatur, Ga. 1911–12.
Bessie Tift College, Forsyth, Ga.
*Brenau College, Gainesville, Ga.
*Southern Female College, La Grange, Ga. 1908.
La Grange College, La Grange, Ga.
Shorter College, Rome, Ga. 1911–12.
*College of Hawaii, Honolulu, Hawaii. 1898.
College of Idaho, Caldwell, Idaho.
*University of Idaho, Moscow, Idaho.
William and Vashti College, Aledo, Ill. 1913.
Shurtleff College, Upper Alton, Ill. 1913–14.
Illinois Wesleyan University, Bloomington, Ill.
Blackburn College, Carlinville, Ill. 1913–14.
*University of Chicago, Chicago, Ill.
*Lewis Institute, Chicago, Ill.

*James Milliken University, Decatur, Ill.
Northwestern University, Evanston, Ill.
*Lombard College, Galesburg, Ill. 1912.
Greenville College, Greenville, Ill.
*Illinois Woman's College, Jacksonville, Ill. 1906.
St. Mary's School, Knoxville, Ill.
Lake Forest College, Lake Forest, Ill.
*McKendree College, Lebanon, Ill.
*Lincoln College, Lincoln, Ill.
*Francis Shimer School of University of Chicago, Mount Carroll, Ill. 1913.
Northwestern College, Naperville, Ill. 1914.
Bradley Polytechnic Institute, Peoria, Ill.
*Rockford College, Rockford, Ill. 1906.
Augustana College, Rock Island, Ill.
*University of Illinois, Urbana, Ill. 1874; 1900.
Wheaton College, Wheaton, Ill.
Indiana University, Bloomington, Ind. 1913–14.
*Earlham College, Earlham, Ind.
Goshen College, Goshen, Ind. 1913–14.
Hanover College, Hanover, Ind. 1913–14.
*Purdue University, La Fayette, Ind. 1905.
Union Christian College, Merom, Ind.
Moores Hill College, Moores Hill, Ind.
St. Mary's College, Notre Dame, Ind.
Valparaiso University, Valparaiso, Ind.
Vincennes University, Vincennes, Ind. 1913–14.
*Iowa State College of Agriculture and Mechanic Arts, Ames, Iowa. 1872.
*Iowa State Teachers' College, Cedar Falls, Iowa.
*Coe College, Cedar Rapids, Iowa. 1912.
Des Moines College, Des Moines, Iowa.
Drake University, Des Moines, Iowa.
Upper Iowa University, Fayette, Iowa. 1913–14.
*Lenox College, Hopkinton, Iowa.
State University of Iowa, Iowa City, Iowa. 1913–14.
Ellsworth College, Iowa Falls, Iowa. 1914–15.
Graceland College, Lamoni, Iowa.
Cornell College, Mount Vernon, Iowa.
*Penn College, Oskaloosa, Iowa.
Central University of Iowa, Pella, Iowa.
Morningside College, Sioux City, Iowa. 1914–15.
Buena Vista College, Storm Lake, Iowa. 1913–14.
Tabor College, Tabor, Iowa. 1913–14.
*Leander Clark College, Toledo, Iowa. 1912.
Midland College, Atchison, Kans. 1912–13.
Baker University, Baldwin, Kans.
University of Kansas, Lawrence, Kans.
Bethany College, Lindsborg, Kans.
*Kansas State Agricultural College, Manhattan, Kans. 1873.
*Washburn College, Topeka, Kans. 1911.
*Fairmount College, Wichita, Kans.
Southwestern College, Winfield, Kans. 1912–13.
Kentucky College for Women, Danville, Ky. 1914–15.
Liberty College for Women, Glasgow, Ky.

Hamilton College for Women, Lexington, Ky. 1913–14.
*State University of Kentucky, Lexington, Ky. 1910.
Owensboro College, Owensboro, Ky. 1913–14.
Louisiana State University, Baton Rouge, La.—State supervisor of home economics teaching in public schools is officer on staff of extension department.
Silliman Collegiate Institute, Clinton, La.
Mansfield Female College, Mansfield, La.
*H. Sophie Newcomb Memorial College, New Orleans, La.
New Orleans University, New Orleans, La.
*Bates College, Lewiston, Me. 1911–12.
*University of Maine, Orono, Me. 1909.
Morgan College, Baltimore, Md.
*Hood College, Frederick, Md. 1907.
*Maryland College for Women, Lutherville, Md. 1909.
Massachusetts Agricultural College, Amherst, Mass.—Resident work in summer school and "farmers' week"; nonresident extension work.
*Simmons College, Boston, Mass.
*Wheaton College, Norton, Mass.
Adrian College, Adrian, Mich.
Alma College, Alma, Mich.—Applied science courses offered; department to be organized in 1915.
*Michigan Agricultural College, East Lansing, Mich. 1897.
*Hillsdale College, Hillsdale, Mich.
Olivet College, Olivet, Mich.
*Alberta Lea College, Albert Lea, Minn.
*University of Minnesota, Minneapolis, Minn. 1902.
St. Olaf College, Northfield, Minn.
Macalester College, St. Paul, Minn.
Gustavus Adolphus College, St. Peter, Minn.
Mississippi Agricultural and Mechanical College, Agricultural College P. O., Miss.—Two extension workers in home economics.
Hillman College, Clinton, Miss.
Mississippi Industrial Institute and College, Columbus, Miss.
Grenada College, Grenada, Miss. 1914–15.
*Rust University, Holly Springs, Miss.
Meridian College, Meridian, Miss.
University of Mississippi, University P. O., Miss. 1913–14.
Palmer College, Albany, Mo. 1913–14.
Missouri Wesleyan College, Cameron, Mo.—Hope to introduce in 1915.
Stephens College, Columbia, Mo.
*University of Missouri, Columbia, Mo. 1901.
Central College, Fayette, Mo.
*Synodical College, Fulton, Mo.
*Lexington College for Women, Lexington, Mo. 1912.
Missouri Valley College, Marshall, Mo.
Cottey College, Nevada, Mo.
Park College, Parkville, Mo.
Lindenwood Female College, St. Charles, Mo.
*Forest Park University, St. Louis, Mo. 1913.
Central Wesleyan College, Warrentown, Mo. 1914–15.
*Montana College of Agriculture and Industrial Arts, Bozeman, Mont. 1894.
University of Montana, Missoula, Mont.
*Bellevue College, Bellevue, Nebr. 1909.

Cotner University, Bethany, Nebr.
Union College, College View, Nebr.
Hastings College, Hastings, Nebr. 1914–15.
*University of Nebraska, Lincoln, Nebr. 1898.
University of Omaha, Omaha, Nebr.
State University of Nevada, Reno, Nev.
New Hampshire College of Agriculture and Mechanic Arts, Durham, N. H. 1913–14.
Rutgers Scientific School, New Brunswick, N. J.—Winter and summer courses begun in 1912–13.
University of New Mexico, Albuquerque, N. Mex. 1914–15.
*New Mexico College of Agriculture and Mechanic Arts, State College, N. Mex.
*Alfred University, Alfred, N. Y.
New York State Normal College, Albany, N. Y.
*St. Lawrence University, Canton, N. Y. 1907.
*Elmira College, Elmira, N. Y. 1911.
*William Smith College, Geneva, N. Y. 1912.
*Cornell University, Ithaca, N. Y. 1908.
*Hunter College of City of New York, New York, N. Y. 1903.
New York University, New York, N. Y.
*Teachers College, Columbia University, New York, N. Y. 1888.
University of Rochester, Rochester, N. Y.—Students may elect in Mechanics Institute, Rochester, N. Y.
Elizabeth College, Charlotte, N. C. 1914–15.
Elon College, Elon College P. O., N. C.
Greensboro Female College, Greensboro, N. C. 1913–14.
Shaw University, Raleigh, N. C.
Southern Presbyterian College, Red Springs, N. C.
*Salem Academy and College, Winston-Salem, N. C.
*North Dakota Agricultural College, Agricultural College P. O., N. Dak. 1890.
*University of North Dakota, University P. O., N. Dak. 1910.
Ohio Northern University, Ada, Ohio—Summer school work.
Municipal University of Akron, Akron, Ohio—Curtis school of home economics, 1914.
Ashland College, Ashland, Ohio. 1913–14.
*State Normal College of Ohio University, Athens, Ohio. 1910.
Mount Union-Scio College, Alliance, Ohio. 1914–15.
German-Wallace College, Berea, Ohio. 1913.
Cedarville College, Cedarville, Ohio. 1912–13.
University of Cincinnati, Cincinnati, Ohio—School of household arts opened in 1914.
College for Women, Western Reserve University, Cleveland, Ohio. 1913–14.
*Ohio State University, Columbus. 1896.
*Defiance College, Defiance, Ohio. 1910.
Denison University, Granville, Ohio. 1910.
Lebanon University, Lebanon, Ohio. 1913–14.
Franklin College, New Athens, Ohio. 1913–14.
*Muskingum College, New Concord, Ohio. 1912.
*Miami University, Oxford, Ohio.
*Oxford College for Women, Oxford, Ohio.
*Western College for Women, Oxford, Ohio. 1902.
*Lake Erie College, Painesville, Ohio. 1898.
Heidelberg University, Tiffin, Ohio. Will open department in 1915.
Wilberforce University, Wilberforce, Ohio.

Wilmington College, Wilmington, Ohio. 1913–14.
University of Oklahoma, Norman, Okla. 1914–15.
*Oklahoma Agricultural and Mechanical College, Stillwater, Okla. 1900.
Henry Kendall College, Tulsa, Okla. 1913–14.
*Oregon State Agricultural College, Corvallis, Oreg. 1888.
Pacific College, Newberg, Oreg. 1913–14.
Philomath College, Philomath, Oreg.
*Allentown College for Women, Allentown, Pa. 1910.
Moravian Seminary and College for Women, Bethlehem, Pa.
*Blairsville College, Blairsville, Pa. 1910.
Bucknell University, Lewisburg, Pa. 1913–14.
Irving Female College, Mechanicsburg, Pa.
Westminster College, New Wilmington, Pa. 1914.
*Temple University, Philadelphia, Pa. 1894.
*Carnegie Institute of Technology, Pittsburgh, Pa. 1912.
University of Pittsburgh, Pittsburgh, Pa.
*Pennsylvania State College, State College P. O., Pa.
University of Porto Rico, San Juan, P. R. 1912.
*Rhode Island State College, Kingston, R. I.
Benedict College, Columbia, S. C. 1913–14.
College for Women, Columbia, S. C.
Woman's College of Due West, Due West, S. C.
*Lander Female College, Greenwood, S. C. 1911.
Claflin University, Orangeburg, S. C.
Converse College, Spartanburg, S. C. 1914–15.
*South Dakota State College of Agriculture and Mechanic Arts, Brookings, S. Dak. 1887.
Dakota Wesleyan University, Mitchell, S. Dak. 1914–15.
Redfield College, Redfield, S. Dak. 1913–14.
Sioux Falls College, Sioux Falls, S. Dak. 1913–14.
University of South Dakota, Vermilion, S. Dak. 1913–14.
*Lincoln Memorial University, Cumberland Gap, Tenn. 1911.
Tusculum College, Greenville, Tenn.
Memphis Conference Female Institute, Jackson, Tenn. 1913–14.
*Carson and Newman College, Jefferson City, Tenn.
Knoxville College, Knoxville, Tenn.
*University of Tennessee, Knoxville, Tenn. 1902.
Maryville College, Maryville, Tenn.
George Peabody Teachers College, Nashville, Tenn. 1914.
*Fisk University, Nashville, Tenn.
Washington College, Washington College P. O., Tenn. 1913–14.
Simmons College, Abilene, Tex. 1913–14.
*University of Texas, Austin, Tex. 1912.
Baylor Female College, Belton, Tex. 1914.
Carlton College, Bonham, Tex.
Howard Payne College, Brownwood, Tex. 1913–14.
*State College of Industrial Arts for Women, Denton, Tex.
Westminster College, Tehuacana, Tex. 1913–14.
*Utah Agricultural College, Logan, Utah. 1890.
*University of Utah, Salt Lake City, Utah. 1909
*University of Vermont, Burlington, Vt. 1908.
*Middlebury College, Middlebury, Vt. 1911.
Martha Washington College, Abingdon, Va.
Virginia Intermont College, Bristol, Va. 1913–14.

Hollins College, Hollins, Va. 1912–13.
Eastern College, Manassas, Va. 1913–14.
Southern Female College, Petersburg, Va. 1910.
*Virginia College, Roanoke, Va. 1909.
Roanoke Woman's College, Salem, Va.
*Sweet Briar College, Sweet Briar, Va. 1910.
*State College of Washington, Pullman, Wash. 1892.
*University of Washington, Seattle, Wash. 1908.
Spokane College, Spokane, Wash.
*University of Puget Sound, Tacoma, Wash.
Whitworth College, Tacoma, Wash.
Bethany College, Bethany, W Va.
Powhatan College, Charlestown, W. Va.
*West Virginia University, Morgantown, W. Va. 1899.
*University of Wisconsin, Madison, Wis. 1903.
*Milwaukee-Downer College, Milwaukee, Wis. 1901.
Carroll College, Waukesha, Wis. 1913–14.
University of Wyoming, Laramie, Wyo. 1907.

COLLEGES OFFERING INSTRUCTION RELATED TO THE HOME.

The following 43 colleges, which report no courses in home economics, offer courses related to the home in their scientific and academic departments, as follows:

Pomona College, Claremont, Cal.—Related courses in biology, economics, and sociology.

University of Colorado, Boulder, Colo.—School of social and home service just established.

Blackburn University, Carlinville, Ill.—Related courses in chemistry and biology.

Northwestern University, Evanston, Ill.—Course in historic styles in architecture and furniture.

Monmouth University, Monmouth, Ill.—Related courses in chemistry and biology.

Central Holiness University, University Park, Iowa.—Related courses in biology.

Parsons College, Fairfield, Iowa.—Related courses in chemistry, physics, biology, economics, and sociology.

Grinnell College, Grinnell, Iowa.—Courses on food plants, chemistry of foods, decoration, design, and economy of the house.

College of Emporia, Emporia, Kans.—Related courses in biology.

Ottawa University, Ottawa, Kans.—Related courses in household chemistry, food and water analysis.

Friends University, Wichita, Kans.—Sanitary chemistry, food chemistry.

University of Louisville, Louisville, Ky.—Food chemstry, applied biology and bacteriology.

Boston University, Boston, Mass.—Related courses in biology, hygiene, household chemistry, and sociology.

Massachusetts Institute of Technology, Boston, Mass.—Related courses in food chemistry, sanitary chemistry, bacteriology, hygiene, and sanitation.

Smith College, Northampton, Mass.—Sanitary chemistry, applied economics, and charity work.

Mount Holyoke College, South Hadley, Mass.—Chemistry of foods, landscape gardening.

Wellesley College, Wellesley, Mass.—Economics of consumption; air, water, and food analysis.

University of Michigan, Ann Arbor, Mich.

Kalamazoo College, Kalamazoo, Mich.—Related courses in sociology, chemistry, etc.

Olivet College, Olivet, Mich.—Household chemistry.

Hamline University, St. Paul, Minn.—Related courses in biology, chemistry, physics, economics, and sociology.

Central Mississippi Institute, French Camp, Miss.—Related instruction.

York College, York, Nebr.—Related courses in biology, hygiene, chemistry, economics, and sociology.

Vassar College, Poughkeepsie, N. Y.—Sanitary chemistry; municipal and house sanitation; food analysis; charity work.

Wells College, Aurora, N. Y.—Related work in biology, hygiene, chemistry, and economics.

Eton College, Eton College, N. C.—Farmers' wives week; related courses in biology, chemistry, physics, hygiene, sociology, and economics.

Agricultural and Mechanical College for the Colored Race, Greensboro, N. C.—Related courses in biology, chemistry, and economics.

Trinity College, Durham, N. C.—Related courses in economics.

Buchtel College, Akron, Ohio.—Related courses in household chemistry, economics, and sociology.

St. John's University, Toledo, Ohio.—Related courses in biology.

Wittenberg College, Springfield, Ohio.—Related courses in biology.

Pacific University, Forest Grove, Oreg.—Related courses in biology and chemistry.

Williamette University, Salem, Oreg.—Related courses in biology, hygiene, sociology, and the family as a social institution.

Bryn Mawr College, Bryn Mawr, Pa.—Related work in biology, chemistry, economics, and sociology.

Juniata College, Huntingdon, Pa.—Related courses in biology.

Pennsylvania College for Women, Pittsburgh, Pa.—Related course in social service.

Tennessee College, Murfreesboro, Tenn.—Related course in hygiene.

Vanderbilt University, Nashville, Tenn.—Related courses in chemistry, bacteriology, physiology, anatomy, economics, and sociology.

Texas Christian University, Fort Worth, Tex.—Related courses in biology, bacteriology, physiology, and hygiene.

Whitman College, Walla Walla, Wash.—Related courses in biology, hygiene, and chemistry.

Condoria College, Milwaukee, Wis.—Related courses in biology and hygiene.

Mission House of the Reformed Church in the U. S., Plymouth, Wis.—Related courses in biology, hygiene, chemistry, and physics.

Ripon College, Ripon, Wis.—Related course in biology.

DATES OF INTRODUCING HOME-ECONOMICS INSTRUCTION INTO COLLEGES.

Iowa State College, at Ames, has the honor of offering the first collegiate instruction in home economics, in 1872; Kansas State Agricultural College followed the next year, 1873; and the University of Illinois the following year, 1874, although the instruction in the last institution was interrupted for a time and then reinstated in

1900.[1] Other early departments were the South Dakota College of Agriculture in 1887, the Oregon Agricultural College in 1888, and in the same year the New York College for Training Teachers, now Teachers College, Columbia University. The dates of introducing instruction were stated by 147 of 257 colleges reporting instruction in home economics. (Table 1, and list on p. 68.)

In 20 cases the date is 1900 or earlier; 16 additional colleges opened departments from 1901 to 1907; beginning with 1908, the collegiate movement has steadily gained impetus, 4 colleges introducing instruction in 1908, 6 in 1909, 9 in 1910, 8 in 1911, 15 in 1912, 45 in 1913, and 19 in 1914, while 5 colleges announce advance plans for 1915. Distinctive courses in home economics are given by 257 colleges and universities; 43 colleges give applied science courses related to the home; together, a total of 300 higher institutions of the 450 which receive women students. That is, two-thirds of the colleges are already recognizing this field of instruction.

Section 2. DEGREES—TIME ALLOTMENT.

COLLEGE DEGREES OFFERED IN HOME ECONOMICS.

Of 99 colleges furnishing complete data (Table 1), 86 reported that a curriculum in home economics is offered; i. e., an organized group of courses including home economics and related academic courses, extending over one or more years. Of the 86, 3 reported a one-year course; 17, a two-year course; 3, a three-year course; and 54, a four-year course; while 8 reported both two-year and four-year courses, and 1 a three- and four-year course. Sixty per cent, therefore, of the college curricula in home economics set a minimum requirement of four years. Seventy-four colleges furnished data as to the degree, diploma, or certificate granted to those who successfully complete the course. In 12 colleges the degree of bachelor of arts is given for the course in home economics, in 44 colleges the degree of bachelor of science, in 4 institutions the B. S. or A. B. degree; in 1 institution the A. B. degree and a certificate, and in 3 institutions the B. S. degree and a certificate. In all, 64 colleges of the 74 reporting on this question (86 per cent) give the bachelor's degree, and of these 64 giving the bachelor's degree, 44 (71 per cent) give preference to the B. S. degree. Three other institutions give diplomas for the home economics course, and 7 give certificates.

TIME ALLOTTED TO MAIN DIVISIONS OF COLLEGE SUBJECT MATTER IN HOME ECONOMICS.

The time allotted for college instruction in home economics is shown in summary form for various divisions of subject matter in

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[1] These early dates are taken from "The Home Economics Movement," Bevier and Usher. Whitcomb and Barrows, Boston.

Table 2 below. The hours for individual colleges are not shown, but rather the general facts as to the distribution of time in all colleges. The data are given in terms of total hours of teaching and are secured by multiplying the number of hours per week for which instruction in any topic is given by the number of weeks devoted to that topic.

For each main division of subject matter and for its subordinate topics there is indicated the number of colleges giving data as to this instruction (column 2); the amount of instruction allotted to the subject or topic is indicated by the four measures: (*a*) The smallest number of hours allotted for this subject or topic in any college and the largest number of hours so allotted in any college (column 3); (*b*) the mean or middle value of hours, i. e., the value halfway between the largest and smallest number when the hours of different colleges are arranged in order of size (column 4); (*c*) the hours which taken as limits include within them the hours of half the colleges (column 5); and (*d*) "modes," or those numbers of hours for which instruction is given more commonly than it is for other hours. (In column 6 the figure in parentheses with each modal number states the number of colleges giving instruction for that number of hours.) The entry of each main division of subject matter, e. g., "1, House," "2, Family and household," summarizes or presents totals for its subordinate topics. There is presented the combined time allotment for all these divisions of subject matter, in item No. 7 at the end of this table.

This table reveals as nothing else can the general tendencies in college teaching of home economics. The facts of item No. 7 are especially significant: For 87 colleges furnishing data, the total hours of instruction given in home economics varies all the way from 36 to 3,748 hours—the latter an amount of instruction sufficient to employ a student's exclusive time for 20 hours a week for five academic years of 36 weeks each; while four other colleges give similarly in number of gross hours of instruction from 2,094 to 2,836 hours. The typical college may doubtless be thought of as giving about 804 gross hours of instruction in home economics—half give more than that amount and half give less; half of the colleges also give between 497 and 1,186 hours. This offers a standard of self-criticism for the individual college, as indeed do the further details as to tendencies in time allotments for the different divisions and subdivisions of home economics.

Using the mean number of hours allowed by different colleges as the most adequate single figure to indicate their general practice in allowing time in the college schedule, it is noted that the mean hours allotted the general divisions of subject matter are as follows: All instruction on the house, 80–84 hours; the family and household, 72 hours; food and nutrition, 360 hours; textiles and clothing, 240 hours;

home economics teaching, 90 hours; institutional households, 48 hours. It is common knowledge that foods developed as the first division of subject matter; its practical usefulness created the demand, and its close relationships in subject matter to chemistry and physiology won it an easy welcome in the college curriculum. Textiles and clothing ranks next, 240 hours as compared with 360, or two-thirds as large an element in the curriculum as is foods; the other divisions of subject matter—the house, the family, education, and institutional households—together secure a combined time allotment about equal to textiles and clothing.

The relative importance of the main divisions of subject matter at present is indicated by the number of colleges reported here as giving such instruction, and, while not including all colleges which teach these various subjects, the figures are doubtless reliable for the comparative situation: Thus, 73 colleges give instruction in foods and nutrition; the same number in textiles and clothing; 68 in the house; 63 in the family and household; 44 give courses in home economics for teachers; and 9 in the administration of institution households; or scaling the number of colleges giving food courses as 100 per cent, the comparison reads: Food courses, 100 per cent; textiles and clothing, 100 per cent; the house, 93 per cent; the family, 86 per cent; home economics education, 60 per cent; institutional administration, 12 per cent.

The complete table (2) is to be read as follows: Data for courses on the house are given for 68 colleges (column 2); these colleges allot (column 3) from 16 to 690 hours of teaching to this division of subject matter; the mean or middle value of hours so alloted is 80–84, half the colleges allotting more and half less than this number (column 4); half of the colleges allot between 41 and 132 hours to this division of subject matter (column 5); modal or usual time allotments (column 6) given to it are 36 hours (as given by 7 colleges), 72 hours (as given by 4 colleges), and 108 hours (as given by 4 colleges). Among these 68 colleges giving instruction in this division of subject matter, instruction is given in its various subdivisions, "house structure," "house decoration," "house furnishings," etc., as indicated by the table: For "house structure" by 30 colleges which give from 2 to 180 hours, with the mean value 36–45 hours; the limits including half the colleges, 38 to 54 hours; and the modal hours, 24^3, 54^4, 72^2, and 108^2 (i. e., for 3, 4, 2, and 2 colleges, respectively). So for the other subdivisions of subject matter on the house; and so in turn for the other main divisions of subject matter 2, 3, 4, 5, and 6, and their respective subdivisions. The interested reader can thus discover the significant tendencies in college teaching at present; and the individual institution can use the table as a measuring stick to see whether its own teaching falls short of, or reaches beyond, the general practice of American colleges as regards the entire home economics curriculum and the various elements of that curriculum.

It is worth while to state here the comparison of the number of institutions teaching each subdivision of subject matter and the mean number of hours thereto allotted, remembering that "number of institutions" includes only colleges furnishing complete data; hence these numbers are not reliable for the total number of colleges, but are reliable between themselves for comparisons of the work given by this selected group of colleges. The hours given are "the mean number of hours," which are simply a more accurate kind of "average" numbers.

In the 68 colleges included as giving instruction regarding the house, "house sanitation" and "house structure and design" are the two courses most commonly given, the former offered by 35 colleges for a mean of 36 hours, and the latter by 30 for 36–45 hours; while house decoration is a subject of instruction in 24 colleges for a mean of 40–48 hours, house furnishings in 20 for 32–36 hours, equipment in 16 for 18–24 hours, and housework or housewifery in 20 for a mean of 18–24 hours.

In the 63 colleges included as giving courses dealing with the social aspects of the household, household management is offered by 35 colleges and home nursing by 35; while economics of the household is taught in 18, domestic sociology in 15, and the care of the child in 10. The mean time devoted to each of these courses is 36 hours (except 30 for the child-care course).

In the 73 colleges included as giving food courses, the preparation of food is taught in 69 colleges, and the mean time devoted to it is the longest of any food course—128–136 hours. Advanced food preparation is taught in 53 institutions, with a mean of 80 hours. "Food materials" is taught in 44 colleges for a mean of 54 hours, food chemistry in 37 colleges for 72 hours, and dietetics in 55 institutions for a mean of 60 hours. Other food courses are table service, taught by 31 colleges for a mean of 36 hours; cookery for invalids, by 37 colleges for 36 hours; institutional cookery, by 10 colleges for 24–48 hours; demonstration cookery, by 22 colleges for 32–36 hours; history of cookery, by 6 colleges for 15 hours; and marketing, by 16 colleges for 18–20 hours.

In the 73 colleges giving instruction regarding clothing, 53 give instruction in textile fibers and materials for a mean of 36 hours, and 12 give instruction in the manufacture and selection of clothing for 24–36 hours. Clothing courses emphasizing laboratory work are given as follows: Hand sewing, by 49 colleges for a mean of 68 hours; machine sewing by 40, for 72 hours; dressmaking by 40, for 100 hours; millinery by 27, for 54 hours. The care and repair of clothing is taught in 11 colleges for 12 hours. The relation of art principles to the design of clothing is taught in two types of courses: The history of costume, taught in 14 colleges, for a mean of 34–36 hours; and costume design, in 18 colleges, for 48–54 hours. "Laundry, theory, chemistry, economics," is taught by 23 colleges for a mean of 18–32 hours, and laboratory practice in laundry in 4 colleges for 32–72 hours.

Data on time allotments for the courses for teachers of home economics are furnished by 44 colleges. A course on the home economics movement is given by 14 colleges for a mean of from 40–48 hours; a survey course in home economics by 6 colleges for a mean of 16–80 hours. Courses in "methods of teaching household arts in elementary schools" are given by 22 colleges for 36 hours; "in secondary schools" by 23 colleges for 54 hours; and "practice teaching" by 33 colleges for a mean of 48 hours.

The "number of institutions" giving these courses, it should be repeated, is not the total number of colleges offering such instruction; it is that part of the total which furnished complete data; the number of mean hours stated, however, is doubtless a reliable index of the quantity of instruction given for all colleges.

TABLE 2.—*Allotment of time in colleges or divisions of home economics subject matter—by main divisions and by subdivisions.*

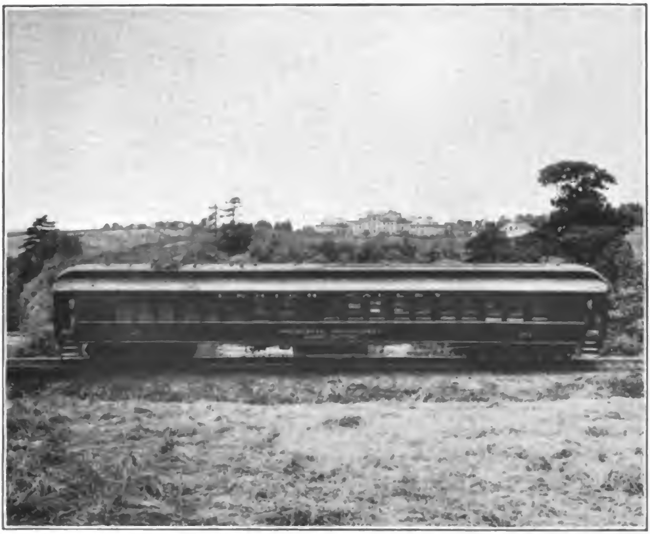
Divisions of instruction and topics.	Colleges giving data on such instruction.	Smallest and largest number of hours given to this division.	Mean or middle value of hours allotted.	Limits (in hours) which include 50 per cent of the colleges.	Modal or most usual time allotments.[1]
1. House	68	16-690	80-84	41-132	36 (7), 72 (4), 108 (4).
House structure and design	30	2-180	36-45	34-54	24 (3), 54 (4), 72 (2), 108 (2).
House decoration	24	2-270	40-48	24-54	36 (4), 48 (4), 54 (2), 108 (2).
House furnishings	20	4-216	32-36	18-51	18 (3), 54 (3).
House equipment	16	4-120	18-24	10-40	4 (3), 6 (2), 18 (2).
House sanitation	35	4-108	36	18-48	36 (6), 48 (5).
Housework—housewifery	20	5-112	18-24	6-90	5 (3), 6 (3), 18 (2), 34 (2), 90 (2), 108 (2).
2. The family and household	63	6-416	72	36-100	36 (4), 48 (5), 54 (5), 72 (8), 108 (4), 144 (4).
Economics of household	18	2-72	36	18-36	36 (6).
Family as a social institution	15	2-128	36	9-54	54 (2), 108 (3).
Household management	35	4-108	36	24-54	36 (8), 48 (4), 54 (4).
Care of sick—home nursing	34	4-160	36	20-36	36 (10).
Care of child	10	2-160	30	24-32	

[1] Figures in parentheses indicate number of colleges giving allotment preceding.

TABLE 2.—*Allotment of time in colleges or divisions of home economics subject matter—by main divisions and by subdivisions*—Continued.

Divisions of instruction and topics.	Colleges giving data on such instruction.	Smallest and largest number of hours given to this division.	Mean or middle value of hours allotted.	Limits (in hours) which include 50 per cent of the colleges.	Modal or most usual time allotments.
3. Food and nutrition	73	72-1,350	360	262-558	
Food materials: Production, manufacture, economics.	44	6-144	54	36-72	48 (3), 54 (4), 72 (8), 108 (3).
Food chemistry	37	12-288	72	60-112	54 (5), 72 (7), 108 (3), 216 (3).
Dietetics (advanced)	55	12-288	60	48-100	36 (5), 54 (10), 72 (5), 90 (4), 108 (8), 144 (4).
Food preparation (practical cookery)	69	32-1,360	128-136	45-180	72 (10), 96 (5), 108 (6), 144 (15), 180 (4), 216 (8).
Advanced cookery	53	20-240	80	48-136	36 (5), 48 (5), 72 (4), 108 (7), 144 (4).
Table service	31	4-180	36	16-54	18 (3), 36 (3), 54 (3), 72 (3).
Cookery for invalids	37	2-144	36	20-48	24 (5), 36 (7), 108 (4).
Large quantity, or institutional cookery	10	12-136	24-48	20-108	
Demonstration cookery	22	4-144	32-36	16-36	36 (5).
History of cookery	6	4-24	15	....	
Marketing	16	2-144	18-20	16-36	18 (3), 34 (2).
4. Textiles and clothing	73	14-1,872	240	128-505	144 (4), 216 (5).
Textile fibers and materials	53	4-360	36	32-72	24 (4), 36 (12), 54 (4), 72 (6).
Manufacture and selection of clothing	12	3-216	24-36	8-36	
Hand sewing	49	12-252	68	36-96	48 (5), 72 (11).
Machine sewing	40	8-240	72	39-108	36 (4), 72 (7).
Drafting	23	9-216	36	18-72	
Dressmaking	40	18-864	100	72-144	72 (7).
Commercial dressmaking	5	36-170	72	....	
Embroidery	20	6-90	36	32-48	36 (4).
Millinery	27	6-432	54	32-80	36 (5), 72 (4).
Costume design	18	4-204	48-54	36-80	36 (4).
History of costume	14	6-144	34-36	24-54	
Care and repair of clothing	11	2-60	12	....	
Laundry—theory, chemistry, economics.	23	2-180	18-32	12-50	18 (3), 36 (3).
Domestic laundry—practice	4	2-96	32-72	32-72	
5. Courses for teachers	44	16-342	90	52-144	72 (5), 108 (4).
Home economics movement	14	2-72	40-48	16-18	
Survey course in home economics	6	2-144	16-80	....	
Teaching of household arts:					
Elementary schools	22	2-170	36	16-72	36 (6), 72 (3).
Secondary schools	23	4-170	54	16-72	54 (3), 72 (3).
Colleges and higher institutions	4	6-72	12-36	12-36	
Practice teaching	33	4-120	48	32-80	36 (5), 72 (3).
6. Institution households	9	24-456	48	....	48 (2), 54 (2).
Institution buildings	1	....	....	....	
Institution organization and management.	3	....	....	....	
Institution dietaries	2	....	....	....	
Institution cooking	2	....	....	....	
Lunch-room work	2	....	....	....	
Institution laundries—theory	1	....	....	....	
Institution laundries—practice	1	....	....	....	
7. Total hours' instruction in all above subjects.	87	36-3,748	804	497-1,186	

A. TENT FOR HOME ECONOMICS TRAVELING EXHIBIT, UNIVERSITY OF TEXAS, AUSTIN, TEX.



B. HOME ECONOMICS EXHIBIT CAR, CORNELL UNIVERSITY, ITHACA, N. Y.

Section 3. COLLEGE STUDENTS TAKING HOME-ECONOMICS COURSES.

Sixty-four colleges reported the number of students in the home-economics courses, and the total number of women students in the institution, respectively, affording a comparison of the two numbers. The home-economics registration numbers varied from 2 to 580, with 45 as the mean number of students taking home economics in a college; the total number of women students in the same institutions varied from 29 to 1,079, with 177 as the median number. The percentage of women students taking the home-economics course varied from about 1 per cent in 3 institutions to from 93 to 100 per cent in 4 institutions; and the mean percentage of students in home economics courses was 26 per cent.

COMPARATIVE NUMBER OF STUDENTS IN DIFFERENT TYPES OF COLLEGE COURSES IN HOME ECONOMICS.

Fifty-three colleges (21 per cent of the 252 colleges offering instruction) report that 1,587 students are pursuing courses in preparation for teaching home economics; and that 3,159 students, almost exactly twice as many, are following home-economics courses for general, nonprofessional, and home-use purposes; and 16 of the 50 report that 195 students are preparing themselves for professional service in household and institution management, dietetics, and allied professional fields. The registration in the 50 teachers' curricula varies from 1 to 314 students, with the median number 15; that in the 46 general curricula varies from 7 to 600, with the median number 26; that in the 16 administration curricula from 1 to 84 students. In 41 institutions there are more students in the general course than in the teachers' course, and in 9 institutions the reverse relation holds.

In addition to the registrations given above, 229 additional students preparing for teaching were reported by 6 colleges; 309 taking home economics for home use by 11 other colleges; and 69 students in vocational courses in household administration and dietetics, etc., by 7 colleges. The total registrations reported were therefore as follows: In preparation for teaching, 1,788 students in 56 colleges; in courses for homemaking, 3,495 students in 61 colleges; and in household administration curricula, 264 students in 24 colleges. Of the total of 5,547 college students reported in these home-economics courses, 3,495 (63 per cent) are studying for home use; 1,788 (32.2 per cent) are preparing for teaching, and 264 (4.8 per cent) are preparing for administrative positions as dietitians, household and institution managers, etc.

These total registration figures come from about 35 per cent of the colleges teaching home economics in 1912–13. However, the institutions reporting registration were the more important colleges; so that these total registration figures represented perhaps two-thirds of the college students in home-economics courses. Probably there were at least 8,000 college women following courses in home economics in 1912–13; and in 1914–15 there are probably not less than 12,000, out of the 75,000 women students pursuing undergraduate or graduate courses in colleges and universities.

Section 4. COLLEGE COURSES IN HOME ECONOMICS.

SCIENTIFIC AND GENERAL COLLEGE COURSES RELATED TO THE HOME.

Forty-three colleges (p. 73) which do not teach home economics offer courses in their academic and scientific departments which have some direct relation to preparation for home life. These "related courses" in 37 of these colleges which reported in detail and similar courses in 140 of the colleges which teach home economics have been distributed. Table 3 shows that related courses in biology are thus offered by 156 of these 177 colleges; chemistry by 138, hygiene by 125, economics by 119, sociology by 102, and art and architecture by 68. One of the results of this instruction, it is believed, is the securing of information which will be of some direct application in the household. Courses in bacteriology as a basis for public and domestic sanitation; the subject of eugenics, which is given attention in nearly 50 institutions; food chemistry, physiological chemistry with its relations to nutrition, and sanitary chemistry; physics with some applications to common life; the economics of consumption, the economic basis of the family, and the standard of living, in courses in economics; the family as a course or topic in sociological study; the legal relations of women and of the household; art in its relations to the house, house furnishings, costume, and landscape gardening—these are some of the subjects taught in academic and scientific courses apart from specific courses in home economics, which will have a practical issue later in life as students come into household relationships. The full data are as follows:

TABLE 3.—*Number of colleges offering courses related to the home.*

	Colleges.		Colleges.
Biology	156	Economics	119
Human anatomy	89	Economics of consumption	77
Human physiology	134	Economics of the household or economic basis of the family	69
Bacteriology in relation to household	99	Legal and economic position of women	56
Bacteriology in relation to public sanitation	90	Industrial status of women	56
Eugenics	48	The standard of living	69
Hygiene	125	Public aspects of the household	36
Personal hygiene	110	Sociology	109
Public health and sanitation	90	The family	86
Care of the sick—home nursing	58	History of the household	63
Care of the child	36	The child and the state	65
Chemistry	138	Law	27
Food chemistry	109	Laws affecting household—"domestic relations"	23
Biological chemistry (with reference to nutrition)	66	Legal position of women	22
Sanitary chemistry	55	Art and architecture	68
Household chemistry	87	The house	45
Textile chemistry	41	House decorations and furnishings	57
Physics	66	Costume design	33
Applied physics of household: Heat, labor-saving machinery	59	Landscape gardening	2

THE COLLEGE COURSE FOR TEACHERS OF HOME ECONOMICS.

Questions were asked as to the collegiate curriculum for teachers of home economics. Of 83 colleges reporting definite home economics curricula, 68 teach the history of education; 74, educational psychology; 61, general methods of teaching; 61, special method of teaching home economics; and 57 require practice teaching of their sudents who wish later to teach. These data are encouraging as regards the preparation offered college students who wish to teach home economics later. The old-time college taught subject matter only; the college to-day offers, alongside subject-matter courses, instruction on the principles of education, the psychological and social foundations of the general teaching method, the method of teaching the special subject for which preparation is sought, and even apprentice teaching to secure familiarity with schoolroom conditions. Fifty-seven colleges, it was just stated, provide practice teaching in home economics, and of these 47 furnished a statement of the amount required. From 2 to 60 "lessons" (mean, 15–16 lessons) are required by nine colleges; from 24 to 320 hours (mean, 75–100 hours) are required by nine colleges; and from 2 to 60 "weeks" (mean, 20 weeks) are required by 28 colleges. "Twenty lessons" or "twenty weeks," probably equivalent amounts, may be taken as the usual amount of practice teaching required by the college in training home-economics teachers.

COLLEGE SUMMER SCHOOLS OF HOME ECONOMICS.

Home economics is taught in many of the college and university summer schools. The courses are usually organized for teachers, although they prove interesting to many housekeepers. More could be done for the latter group by special plans.

Among others, the following institutions offer summer instruction:

Bradley Polytechnic Institute, Peoria, Ill.; University of California; Carnegie Institute of Technology, Pittsburgh; College of Industrial Arts, Denton, Tex.; University of Chicago; Colorado State Teachers' College, Greeley, Colo.; Connecticut Agricultural College; Cornell College, Mount Vernon, Iowa; Cornell University, Ithaca, N. Y.; Des Moines College, Iowa; Johns Hopkins University; University of Idaho; University of Illinois; Iowa State College; Kansas Agricultural College; University of Kentucky; Lewis Institute, Chicago, Ill.; University of Louisiana; University of Maine; Massachusetts Agricultural College; Middlebury College, Vermont; University of Minnesota; University of Missouri; University of Nebraska; New Jersey State College, New Brunswick, N. J.; University of North Dakota; Ohio State University; Oregon Agricultural College; Peabody College for Teachers, Nashville, Tenn:[1] Pennsylvania State College; South Dakota State College; Summer School of the South, Knoxville, Tenn.; Teachers College of Columbia University, New York City; University of Texas; Tulane University; Utah State Agricultural College; University of Utah; University of Virginia; State College of Washington; West Virginia University; University of Wisconsin.

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[1] Began 1914.

One or two observations may be made upon these university summer schools. In the first place, they have been a most effective means of introducing home-economics teaching into the public schools; the schools at the University of Virginia and the Summer School of the South, at Knoxville, have been especially remarkable in this way. Again, the introduction of home economics into the summer school has in several instances been the preface to the establishment of a university department, as at the University of California.

The summer sessions of certain noncollegiate institutions, notably Stout Institute, Menominee, Wis., and Mechanics Institute, Rochester, N. Y., may well be mentioned here; also the summer school of cookery of Mrs. Janet MacKenzie Hill, at South Chatham, Me., and especially the school of domestic science at Chautauqua, N. Y., which enlists college teachers of home economics on its staff and attracts many teachers as well as housekeepers. Domestic science instruction began at Chautauqua in 1879; in the school of 1913 there were offered the following: Demonstration lectures, home cookery, advanced cookery, the house, schoolroom cookery, food and dietetics, institution cookery, household chemistry, primary methods, sewing, shirt waists.

Section 5. OTHER AGENCIES FOR TEACHING HOME ECONOMICS.

COLLEGE-EXTENSION EDUCATION FOR THE HOME.

The State colleges and universities with home-economics departments have quite commonly adopted a policy of extension education for the home, just as their entrance into agricultural education has involved the development of extension agricultural teaching. Indeed, extension of home education has plainly been in many institutions a corollary of agricultural extension. There is need that its own validity be accepted, however, so that home extension teaching will be developed for urban as well as for country homes. College-extension work for the home takes the form of housekeepers' conferences, short-term schools of housekeeping, home education demonstration trains, movable schools of household arts, extension-lecture service, popular bulletins for the housewife, correspondence instruction, information service which has great possibilities of expansion through the county agricultural bureau or agent cooperating with the colleges, and many other agencies, such as clubs, exhibits, and contests.

HOUSEKEEPERS' CONFERENCES.

The State colleges and universities with departments of agriculture have commonly organized a short popular conference for farmers lasting a week, more or less, and with it an accompanying conference for farmers' wives, or the "farmers' wives' week," as it is often called. In other cases such a conference is organized independently as the "housekeepers' conference," "school for housekeepers," or the "week's course in home economics."

For example, at the University of Texas a program of lectures, demonstrations, exhibits, and conferences is provided, including usually a series of consecutive lessons extending throughout the week and with various special features as well.

The school for housekeepers of the University of Illinois offers a two weeks' program dealing with various phases of home life.

> It is planned not only for the activities of the home, but consideration is given to what may be called the higher life of the home. The health of the family, provision for beauty of surroundings, and wise administration are considered in home nursing, home decoration, household management, and care of the children.

The instructors include the members of the staff of the household science department, representatives of other university departments, and certain outside speakers. The program of the housekeepers' school, which is open without entrance requirements or fees, included in January, 1914, the following and other topics:

> *The house.*—Home life of the children of the bush, Home life in Australia, The Illinois way of neighborhood planting, Good and bad architecture and why, Appreciation of pictures, Some suggestions for the home library, Care of the house, Good taste in furnishings, System of lighting for the farm home, Systems of water distribution in the farm home, and Why household-science clubs should be organized among housekeepers.
>
> *Food.*—Food and its function in the body, Planning meals, Food for the sick, Care of milk in the home, Pure-food legislation, Table setting and service, Home canning, Rural school lunches and equipment, Vegetables, Food for the child, Infant feeding, Farm marketing, and Food demonstrations.
>
> *Clothing.*—Some points in dressmaking, Good taste in dress, Choosing material for clothing, Home millinery.
>
> *Health.*—Health in the home, Home care of the sick.

Immediately following the school for housekeepers, the University of Illinois offers extension courses in cooking and sewing which continue through four weeks and furnish opportunity for consecutive laboratory instruction in these fields, without entrance requirements, or fee, or university credit.

The Missouri Homemakers' Conference Association was formed in 1907 as an organization of women attending the farmers' week conferences held at the University of Missouri under the auspices of the State board of agriculture, which makes a grant toward speakers' expenses at this annual meeting. Its constitution states its object:

> To unify the housekeepers of Missouri in an effort to better their own home conditions, to help future homemakers by encouraging the introduction and development of home economics in all the schools of the State, and to cooperate with other organizations working toward the same end.

Annual meetings are held during farmers' week, and the reports of the papers and addresses have been published by the State board of agriculture. The report for 1913, a pamphlet of 130 pages, which includes the following addresses and papers, will indicate the scope of the week's meetings:

The problem of the daughter; The feeding of children; The child and the law in Missouri; The boy in the family; Games and dances for children; Problem of the boy in the country; Babies' health contest (with exhibits of clothing, meals, toys, books); Girls' tomato canning club; Hot lunches in rural schools; Short course in home economics; Drafting patterns; Art and handwork in rural schools; School sanitation; Commercial gardening; A garden serving the home table a whole year; Fruit and flowers for profit; Poultry; Farm home management; Salt-raising bread; and Organization of homemakers' clubs.

The Missouri Homemakers' Conference has been influential in introducing tomato-canning clubs and in securing the appointment of a woman institute lecturer for the farmers' institutes held throughout the State under the State board of agriculture, who will organize county homemakers' conferences and local homemaking clubs. Some local clubs have indeed already been formed.

List of housekeepers' conferences.—The following table presents the facts as to these conferences, including also the shorter "schools," in some 29 colleges and universities. Several of them, it is noteworthy, are colleges on private foundations.

TABLE 4.—*Housekeepers' conferences, by colleges.*

Names of institutions.	Length of conference.	Attendance.
Colorado State College, Fort Collins	1 week	....
Florida State College for Women, Tallahassee	2 weeks	40 to 50
Lombard College, Galesburg, Ill	2 days	40
McKendree College, Lebanon, Ill	1 week	43
University of Illinois, Urbana	2 weeks	350
Purdue University, Lafayette, Ind	1 week	50 to 100
Kansas State College, Manhattan	6 days	125
Kentucky University, Lexington	1 week	Small.
University of Maine, Orono	4 days	720
Massachusetts State College, Amherst	5 days	....
Michigan Agricultural College, Lansing	4 days	500
Albert Lea College, Albert Lea, Minn	1 week	32
University of Missouri, Columbia	5 days	200
Montana State College, Missoula	10 days	76
University of Nebraska, Lincoln	2 days	200
New Mexico College of Agriculture, State College	1 week	20
Alfred University, Alfred, N. Y	3 days	150
St. Lawrence University, Canton, N. Y	1 week	....
Cornell University, Ithaca, N. Y	5 days	1,200
North Dakota Agricultural College, Agriculture College	3 days	125
Muskingum College, New Concord, Ohio	5 days	700
Ohio University, Columbus	1 week	40
Oklahoma State College, Stillwater	1 week	240
Oregon State College, Corvallis	1 week	75
Pennsylvania State College, State College	1 week	200
University of Texas, Austin	1 week	1,000
University of Tennessee, Knoxville	3 days	200
University of Vermont, Burlington	2 days	150
University of Wisconsin, Madison	2 weeks	640

SHORT-TERM SCHOOLS OF HOUSEKEEPING.

Another type of popular home-economics teaching for nonmatriculated students is the "short course," or the "short winter course" as it is sometimes called, in agricultural colleges because of its relation to courses offered at that season when farmers may readily attend. It is distinguished from the "housekeepers' conference," "housewives' week," and "week course," in that the time of instruction is longer and the emphasis is upon consecutive lessons in laboratory and classroom in a regular curriculum so arranged as to require full-time study from those attending through a definite period of time. It is thus a complete school meeting at the college, though for a limited period. Its methods are study and instruction, rather than address and inspiration as in the shorter conference. In 23 colleges the length of the short school varies from 2 to 32 weeks, and the median length of the course is 12 weeks. Several institutions offer instruction extending more than one season, and students are urged to return. This plan deserves emphasis; it offers a motive to continued study; it increases the worth of some of the work, e. g., in principles of nutrition, where 12 weeks of study provide only a beginning.

The aim of the short course at the *University of Missouri*, instituted in 1912, and seven weeks in length, has been stated by Miss Stanley, director of the department of home economics, to be that of—

> supplying a type of training similar to that furnished young men in the short course in agriculture. With this end in view, we have selected from our regular course those subjects which bear most directly on home life and have adapted them to the needs of the short-course student. These have been supplemented by courses in agriculture in which the women might be interested, such as dairying, poultry raising, and home gardening.

Kansas State College opens a two-term housekeepers' course to provide special training in home making. Young women between 18 and 21 are admitted upon presentation of the common-school or high-school diploma, or upon passing examination in the usual school subjects. Young women over 21 are admitted without examination. The following subjects are included in the housekeepers' course: Cookery, 10 hours in first term and 12 hours in second term; sewing, 10 hours; dressmaking, 8 hours; color and design, 6 hours; home nursing, 2 hours; floriculture, 3 hours.

Cornell University, in its department of home economics, offers a curriculum of study for three months beginning in December, the "winter course." There are no entrance examinations; the course is open to persons 18 years of age. "There is no limit of age above 18, and the course has been attended both by young women and by some older women. Many of the latter, mature in experience, have brought much inspiration and help to the department." The required subjects in the winter course are:

> *Foods.*—Food composition, food values, methods of selection, preparation, principles of nutrition, dietetics, care and feeding of children. Laboratory work is given for the application of principles and includes practice in the preparation of food and in serving.

Household sanitation.—Sanitary condition of the house and site; conditions promoting health; proper care of the sick; and the relation of bacteriology to the household.

Household management.—The family income; the cost of living; household accounts; problems of domestic service; methods of housekeeping; equipment; marketing.

Sewing and drafting.—Laboratory work, instruction in sewing, and in cutting and fitting garments.

Art in the home.—This course considers the development of more artistic home surroundings; the building, site, garden; the furnishing and decoration of the house; the selection of books and pictures.

Persons registered in the winter course in home economics have opportunity to enter the courses in dairying, poultry husbandry, gardening, and extension work. As opportunity is offered, short-term technical courses of special interest to farm women will be added, such as canning and preserving, laundry management, dressmaking, millinery. It is hoped that, as these short technical courses are developed, many farm girls may find through them opportunity to engage in profitable enterprises without the necessity of leaving the farm. In short, the department hopes to aid in standardizing activities in which women are interested.

Twelve scholarships for the winter-course students are provided by the New York State Grange, each $50 in cash, to be awarded to men and women who obtain the highest standard on competitive examination.

List of short courses.—A list of the institutions giving short-term instruction, nearly all of them State colleges and universities, is contained in Table 5. The list would be lengthened if there were included institutions giving practical classes in household arts which are not, however, organized as a school curriculum.

TABLE 5.—*College short-term schools of housekeeping.*

Names of institutions.	Weeks in course.	Registration.
Colorado Agricultural College, Fort Collins	24	
Florida State College for Women, Tallahassee	8	8
University of Idaho, Moscow	20	8
Lombard College, Galesburg, Ill	16	7
University of Illinois, Urbana	4	
Purdue University, Lafayette, Ind	8	22
Iowa State College, Ames	2	63
Kansas State Agricultural College, Manhattan	24	170
University of Minnesota, Department of Agriculture, St. Paul	4	
University of Missouri, Columbia	7	24
New Jersey State College, New Brunswick	12	19
Cornell University, Ithaca, N. Y	12	60
Salem College, Winston-Salem, N. C	12	
North Dakota Agricultural College, Agricultural College	10	40
State Normal College of Ohio University, Athens	4	150
Oklahoma Agricultural College, Stillwater	20	8
Oregon Agricultural College, Pullman	4	80
Pennsylvania State College, State College	12	10
Temple University, Philadelphia, Pa	32	20
Lander College, Greenwood, S. C	10	8
South Dakota State College, Brookings	12	15
University of Vermont, Burlington	2	5
Washington State College, Pullman	6	15

HOME EDUCATION DEMONSTRATION TRAINS.

Twenty-seven colleges report the use of railroad cars in extension teaching; in 17 of these colleges the home-economics department participates in the use of these demonstration cars, and 4 of the remaining 10 have done so occasionally. The home-economics departments in the following institutions have regularly used railroad demonstration cars: Colorado Agricultural College, Florida State College for Women, University of Idaho, Earlham College (Earlham, Ind.), Iowa State College, State University of Kentucky, Michigan Agricultural College, University of Minnesota, Montana State College, State College of New Mexico, Cornell University, Agricultural College of North Dakota, Oklahoma Agricultural College, University of Tennessee, University of Texas, State College of Washington. The character of these traveling exhibits is indicated by that of the Colorado Agricultural College.

The Colorado Agricultural College in February, 1914, operated "the Colorado dairy, silo, and forage crop demonstration train" over the Santa Fe lines in Colorado in cooperation with the colonization department of that road, a train of six cars and coaches, two of which offered provision for home economics.

One vestibuled coach was reserved for lecture work, and cooking demonstrations on "Variety in the preparation of cured meats and dairy products" were given by an instructor from the department of home economics, assisted by a senior student. Preliminary to the cooking of cured meats a talk on "Practical methods for curing meats on the farm" was given by a member of the animal husbandry department.

One end-door baggage car was reserved for college exhibits, these exhibits representing the departments of home economics, animal husbandry, agronomy, and veterinary science. The space allowed for home-economics exhibits—45 feet—was in the main occupied by exhibit cases, each 48 inches long by 30 inches wide by 6 deep, and so mounted that the center of the case was on a level with the eye. The cases were stained brown, backed with brown arras cloth, and closed with glass doors, and gave an attractive setting, despite the dust and smoke.

The purpose of the exhibit, expressed in the sign making announcement of "Suggestions for home improvement," dealt in the main with improvement in house equipment, and the average Colorado ranch home was the standard in mind. There should have been included as primary essentials consideration of water supply, waste disposal, lighting and heating plants, and the ice plant; but the expense of models was prohibitive, and for these topics suggestions were confined to a bulletin-board announcement of descriptive literature on the subjects named.

In large part the exhibit took the form of models made to a scale. Each grouping of models and illustrative material was made as graphic as possible, and in the main self-explanatory, so that the exhibit case might with brief announcement tell its own story. Overcrowding was avoided. Placards placed over the cases made simple, yet, in some instances, striking announcement. These placards were uniform in size and style, showing a clear-cut, heavy-face gothic letter in black on white board.

Following is a brief statement of the detail of the exhibit given as to case content:

1. *Wall finishes and wall coverings.*—Models suggesting color harmony in walls, ceiling, and woodwork, arranged in sets suggesting combinations suitable for living room, bedroom, and kitchen; nine models.
2. *Floor finishes and floor coverings.*—Nine models.
3. *Ventilating devices and the metal weather strip.*—Four models. Placard gives three especially important fresh-air facts.
4. *You spend one-third of your life in bed. Have that bed right.*—Sets forth in miniature the parts that go to make a well-equipped bed.
5. *Desirable and possible equipment for cleaning.*—Included in this collection are three models showing desirable types of work aprons.
6. *Laundry hints.*—The most attractive of the articles included in this case is a miniature laundry board cover of desirable type.
7. *Miscellaneous worth-whiles.*—Uncommon yet excellent devices and conveniences for the kitchen work table.
8. *The housewife's tool chest.*—A placard within the case reads, "Keep these in the house. Let the old man buy his own." The uncouthness of expression has been criticized, yet the sign forcibly calls attention to a need, and the use of the sign will be continued.

The two remaining cases show house dresses for the housewife and garments for the small child that are at once attractive, easily constructed, and inexpensive.

A set of open shelves, fully equipped, has its contents brought to the attention by the placard—

THE PANTRY SHELF

AS IT OFTEN IS. AS IT MAY BE.

Models made to a scale show "The ventilated and rat-proof cellar," "A homemade ice box," the ironing board that "stands pat," and a hinged table.

The Housewife's Ten-Dollar Library occupies a bookshelf. Printed lists giving titles, authors, publishers, and cost are available for free distribution.

A bulletin board announces "Things worth knowing about," and in illustration are shown bulletins that are available for distribution.

Mail boxes bearing the placard "Write for further information" are distributed throughout the train. The contents of these, together with later correspondence and verbal reports, indicate that the demonstration train is creating interest wherever it goes.

It should be added that the exhibit described above constituted a part of the larger one representing the college at the stock show in

Denver late in January. Similar displays, but on a smaller scale, found a welcome place at county fairs during August and September.

EXTENSION TEACHING—MOVABLE SCHOOLS OF HOUSEHOLD ARTS.

Twenty colleges report as one form of extension work "movable schools of household arts," i. e., instruction of a consecutive organized form, extending through a week or more, given by regular instructors of the college at various points distant from the institution. Such schools are usually planned by a local committee or permanent organization, which provides for a meeting place, collects the fees which are usually merely nominal or cover only expenses of materials, canvasses for students, and makes other necessary local arrangements.

The schools are planned in a series, so that the one, two, or more instructors go from the completion of one school to the beginning of the next. Such movable schools have been organized by the following institutions: State Universities of Illinois, Kentucky, Minnesota, Nebraska, Ohio, Missouri, Wisconsin, and Texas (beginning 1914); Purdue University and Cornell University; the State Colleges of Colorado, Kansas, Florida, Massachusetts, New Mexico, Oklahoma, Oregon, Pennsylvania, and Washington; also by Lombard College, Galesburg, Ill. The United States Department of Agriculture has published two outlines of instruction for movable and correspondence schools. (Cereals, Experiment Station Bulletin, 200; Vegetable Foods, Experiment Station Bulletin, 245.) The following description of the movable schools of the University of Illinois illustrates their methods:

The University of Illinois, through its department of household science, maintains movable schools of domestic science by sending out instructors for a week at a time to various communities, to pass at the end of the week to a similar school in another town. Two types of schools are organized, those with one instructor, in which special attention is given to food work, and those with two instructors in which a wider program, including household management and clothing, as well as food, is provided.

The weekly program in the one-teacher school provides for five afternoon sessions each two hours in length. There is an introductory meeting devoted to "better living conditions," and this is followed on four successive days with the following topics: Food requirements of the body, with a demonstration of protein foods, milk, eggs, cheese; protein and fat in the diet, with a demonstration of meats, fats; carbohydrates in the diet, with demonstration of starchy vegetables and bread; and fruits and green vegetables.

The two-instructor school provides a girls' class as well as that for housekeepers; its sessions begin Monday afternoon, and then occur both morning and afternoon from Tuesday till Friday. The general sessions provide the following topics: Meaning of household science to the housekeeper; food problems: foods containing nitrogen; protein and fat in the diet; carbohydrates in the diet; water and mineral matter; demonstrations with eggs, cheese, meats, starches, fruits, and green vegetables; lectures on the house and its appointments, bedrooms and living rooms, kitchen, and household conveniences, household sanitation, better living conditions, and the selection and care of clothing. The special classes for girls is given lessons in foods, including protein foods, milk, eggs, custard, junket, and creamed eggs, uses of tough and tender meat, starchy vegetables and breads, and preparation of fruits.

The movable school is arranged through some local organization which pays the traveling expenses of instructors, the hotel expense, and materials for class use, which last costs from $10 to $15 in cookery classes. The local organization is asked to provide equipment, including gas or gasoline stoves with oven, refrigerator, cupboard, tables, dishpans, teakettles, bread boards, plates, and dishes for serving, dishcloths and towels with rack, and blackboard. They also provide a hall, with water supply, a woman for dishwashing, and arrange with the local store for food materials.

COLLEGE EXTENSION LECTURE SERVICE.

Forty-nine colleges and universities report that members of their staffs lecture before farmers' institutes on topics concerned with the home, and 22 report that such services are regularly undertaken; 23 colleges report similar lectures given before the granges, farmers' unions, and other voluntary rural organizations; while 58 report addresses on household subjects before women's clubs. The movable schools referred to above (p. 91), which provide continuous instruction by a college teacher in various communities are, of course, another type of extension lecture work. The extension lectures of the Massachusetts Agricultural College, Amherst, are a good example of lecture activity.

This college offers to arrange for individual lectures or series of lectures on various subjects at points throughout the State. These lectures are available "to all kinds of agricultural organizations, granges, farmers' clubs, boards of trade, women's clubs, Young Men's Christian Associations, church clubs, schools, and others which are interested in problems pertaining to agriculture and country life." Miss Laura Comstock, extension professor of home economics, gives on this basis the following lectures on home economics: Friends of the household; Labor-saving devices; Pests of the household; Some essentials of right living; The art of jelly-making; The value of budget making and account keeping to the housekeeper; Value of home economics in rural schools; What our food contains; Women's work in the community; Furnishing of the house; Sanitation in the home; The relation of right nutrition to general welfare; The human body and health. In economics and sociology lectures are offered on "The problems of the modern family," and "Eugenics of marriage, or mating for race improvement." Among the "lectures with a lantern" sent out in typewritten form with accompanying lantern slides is one on "Home and school-ground decoration."

POPULAR BULLETINS FOR THE HOMEMAKER.

Twelve colleges report the regular publication of popular bulletins on the household for the benefit of the homemaker; and in several other colleges there are plans for such publications or there have been occasional publications of this character. The colleges publishing such bulletins are: Colorado Agricultural College (Fort Collins), University of Illinois (Urbana), Purdue University (La Fayette, Ind.), University of Idaho, (Moscow), Iowa State College (Ames), University of Maine (Orono), University of Minnesota (St. Paul), University of Missouri (Columbia), Cornell University (Ithaca, N. Y.), School of Practical Arts of Teachers College (New York City), Agricultural College of North Dakota (Agricultural College), Ohio University (Columbus), Oklahoma Agricultural College (Stillwater), Oregon Agricultural College (Corvallis), and University of Texas (Austin). Other institutions have plans for such publications. A list of these publications is given in the bibliography (Part IV of this report, Bulletin, 1914, No. 39).

The influence of such a system of popular bulletins on homemaking topics may be inferred from the fact that editions of 30,000 to 50,000 have been circulated by the State College of Oklahoma, the University of Minnesota, and Cornell University, and that the Cornell reading course for the farm home now includes about 30 titles on food, clothing, housing, and housework in its various divisions, and even the cultural and personal life as expressed in such subjects as "reading in the home" and "the Christmas festival."

One restriction on the usefulness of the bulletins published by State institutions has been that, as State documents, they are generally limited in circulation to the State issuing them. A successful bulletin is soon known and desired outside the State of issue, and this limit on its usefulness is unfortunate. On the other hand, State competition has probably assisted in developing these admirable series of bulletins, and doubtless a method of permitting reprints in other States will be possible. There is already obvious need of a national clearing house for this sort of household bulletin, just as the Office of Experiment Stations in the United States Department of Agriculture serves for the publications of the State agricultural experiment stations.

Another type of college publication is the periodical-announcement bulletin sent out by many of the State institutions, such as the College Courier, of the New Mexico College of Agriculture, and the Announcer, of the New York College of Agriculture. These papers are sent free to residents of the State and are of considerable help in the efforts to extend home-economics teaching, by securing its introduction into public schools, by advancing extension teaching, and by creating interest in resident study at the colleges.

The Home Training Bulletins, by Prof. McKeever, of the University of Kansas, illustrate the possibilities for wide distribution of information in leaflet form via extension agencies. These bulletins cover a number of practical topics in a practical way—the cigarette-smoking boy; the money relations of young people; choice of a vocation; training the girl to help in the home; and other matters which should be the subject of home training.

Banks have purchased Prof. McKeever's bulletins on Thrift, to educate their depositors; and social-betterment organizations and schools have aided in a widespread circulation of other of the bulletins. The bulletins are intended especially to guide parents in the training of children; they form valuable material for women's clubs and similar organizations. (See bibliography, Part IV, of this report, Bulletin, 1914, No. 39.

CORRESPONDENCE INSTRUCTION BY COLLEGES.

Eleven institutions—Cornell University, Chicago University, Kansas Agricultural College, University of Maine, Oregon Agricultural College, University of Washington, University of Missouri, Pennsylvania State College, University of Texas, University of Wisconsin, College of Hawaii—report correspondence instruction in home economics. Such correspondence instruction is to be distinguished in method from the mere issuing of bulletins by the provision, in addition to the printed page or lesson, of an opportunity or requirement that the reader submit written lessons to the college for criticism, suggestions, and further directions as to study or practical procedure. Within such a form of teaching it is possible naturally to do work of varying educational value. In some cases, the lesson papers which accompany the bulletins set simple questions for the reader to answer, and endeavor to draw out her experience, asking that comments, questions, and problems be sent in to the college. Thus the New York State College of Agriculture at Cornell University has 22,000 persons in its housewives' reading course to whom the study bulletins with their accompanying schedule of questions are sent, though naturally personal correspondence is entered upon by only a fraction of them.

Soon after the Cornell reading course for farmers' wives had been established requests came to the college for the organization of local clubs, which might follow the reading-course lessons. The department of home economics prepared a study-club bulletin, giving typical programs, a constitution, and suggestions for organization. According to the plan, neighborhood clubs are organized, sometimes of women alone, sometimes with men also as members. Domestic subjects are considered, a social hour is part of the program, and refreshments are often served. In some instances the clubs have become neighborhood improvement organizations, providing plans for various improvements. The club at Ballston Spa, N. Y., raised money for the building of a hall, which has become the community center. Over 60 clubs have been organized in various parts of the State.

The University of Texas reports six persons taking correspondence credit courses in home economics and announces the beginning of a series of popular bulletins for the housewife.

The University of Chicago offers in its correspondence study department opportunity to persons not in residence at the university to pursue a number of courses related to the home, and thereby receive university credit toward degrees. This department is expected to aid teachers, persons who wish to do part of their college study in nonresidence (the rules of the university permit candidates for the bachelor's degree to take one-half their courses while not in residence), and "parents uncertain how to deal wisely with their children." First aid to homemakers in various other fields is also afforded, and a registration of 90 correspondence students in household administration is reported by the university. The unit of study is the major course, the equivalent of 60 recitation periods in residence; fees are set at $16 per major course, and $8 for each minor course (one-half a major course). Three major courses in the department of household administration, including house sanitation, food and dietaries, and administration of the house, are given in correspondence by Prof. Talbot; and major courses in the school of education of the university are given as follows: Design, decoration and furnishing of the house, application of heat to food materials (two major courses), the chemistry of foods, and the teaching of home economics. For the latter course, a prerequisite is set of one year of technical training in home economics.

COLLEGE AS A BUREAU OF HOUSEHOLD INFORMATION.

Nineteen colleges report that their home-economics department serves in effect as a bureau of information for answering inquiries of housekeepers, and the department in every State college or university, it may be assumed, performs something of this service. It has developed naturally enough through the relation of such an institution to its constituency.

The housewife is now beginning to benefit from this relationship which has been already developed to such an extent in agricultural teaching. This "Wisconsin idea" and the "Amherst movement" (so named from the Massachusetts Agricultural College, at Amherst, Mass.)—the plan to make the State institution a consulting center for exact knowledge—is beginning therefore to be applied as regards matters of home concern. In time this consulting service will be organized in local bureaus of household information in towns and cities, and rural districts, all related to a central office at the State college or university, thus making available for each home manager on call or by correspondence or telephone, reliable information upon her vital problems. The Indiana law providing for county agricultural agents, charged with responsibility for the improvement of domestic-science teaching, girls' club work, etc., to act under the direction of State College of Agriculture at Purdue University, is a noteworthy step. The provision of expert women agents to act with the agricultural agent[1] would be the next logical step, and this has already been proposed.

MISCELLANEOUS HOME-ECONOMICS EXTENSION WORK OF COLLEGES.

The college home-economics departments have, especially in the State colleges and universities, endeavored to serve a wider public by affiliated enterprises of a social-service character intended to forward a better home making. The list of these undertakings is suggestive: Tomato and canning clubs, which particularly in the South have had aid from the colleges, and in certain States leadership from the director of home economics in the State college; the boys' and girls' clubs under the direction of the State colleges of New Mexico and Oklahoma; the girls' home-economics clubs of Kansas; girls' contest clubs of Idaho; and the rural progress clubs of New York State—all under the direction of State colleges and universities. Exhibits at State and local fairs have been undertaken by institutions like Cornell and the University of Texas. Institutions located in cities have utilized as a practice field for intending teachers the home-betterment work in settlements, as Lewis Institute, Chicago, and Teachers College, New York. Several colleges provide special classes of a practical nature for nonmatriculated students from the local community, largely home women who wish to study home economics for home use, as notably at Teachers College (New York) and Simmons College (Boston); others offer special classes for teachers, as at Simmons College, and probably nearly or quite all send speakers to teachers' institutes and educational rallies. In the agricultural colleges much attention is naturally paid to rural school problems; so practice teaching and demonstrations are given in rural schools (Cornell, University of Missouri, West Virginia University, New Mexico Agricultural College). One State college, that of Rhode Island, has given extension courses in a near-by university, Brown, at Providence; and the University of Tennessee has furnished a published course of study and instructors in domestic science for the summer teachers' institutes under the State superintendent of public instruction. Colleges on private foundation recognize the obligation, or opportunity at least, in extension education for home betterment; so Milwaukee-Downer College holds demonstrations and exhibitions in home economics; and many other institutions give public lectures or provide housekeepers' conferences. The colleges have naturally aided in the introduction of household arts into the public schools; the home-economics department of one State university at least recognizing this propaganda as one of its important purposes, while others, as the University of Illinois and Louisiana State University, cooperate in the supervision of household science in the schools, the former in the high schools of the State and the latter in the public elementary schools, through an "inspector of household science" and "supervisor of home economics," respectively.

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[1] See Part II of this report, Bulletin, 1914, No. 37, p. 159.

The Kansas State Agricultural College has developed a well-rounded system of extension education in home economics which may be cited as an example. It includes women's auxiliary associations connected with the farmers' institutes, extension service to the women's clubs of the State in the field of home economics, movable schools in cooking and sewing, home-economics clubs for girls and young men, in addition to short courses and other work given at the college for those who are not matriculating for the degree.

The women's auxiliaries of the farmers' institutes hold monthly meetings, with programs sent out from the college. They are attempting to bring the women of the country together to consider home problems and other matters of interest to them. Suggestive programs are sent out from the college for the meetings of the women's auxiliaries. A typical program is that on house cleaning, with the following topics:

Roll call. Little helpful hints on house cleaning.
Papers: The care and cleaning of walls; The proper treatment of floors; Ways of renovating furniture; The importance of the cellar in the house.
Discussion: The best way to clean the house.
  Some house-cleaning problems.
    1. Some modern helps.
    2. Advantages of one room at a time.
    3. Feeding the family during the house cleaning.
    4. Rugs or carpets—which?

The extension department has drawn up a very comprehensive program of meetings for women's clubs, providing suggestions of papers, discussions, round tables, etc., on each of the following topics:

Reading matter in the home; Industrial training for the young; Modern graded school system; Phases of womanhood; The home nurse; Household conveniences; Beauty in home; Modern high schools; Science in the household;

Canning and preserving; Neighborhood improvement; The æsthetic influence of our country upon our homes; Household accounts; Vegetables; Women, the spenders; The relation of women to civic affairs; Food and food values; Bread; The modern home; Fruit; Children and their well-being; The kitchen as a workshop; Meat and other protein foods; Textiles and clothing.

The movable schools in cooking and sewing are organized in any community where at least 24 persons not under 15 years of age form a group and request the organization of a class. Each school begins Monday afternoon at 1.30 and closes Saturday at noon, with regular morning and afternoon sessions, providing five lessons in cooking and five lessons in sewing. At 4 o'clock each afternoon there is an open conference, to which all women are invited, and one public evening meeting is arranged if the local committee desires. A daily demonstration will also be given at the high school if desired. Each member of the movable school pays in advance a fee of $1 and agrees to the assessment of 50 cents for supplies. The only additional expense to the community is the entertainment of the two teachers for the week and a nominal fee of $5 to meet in part their traveling expenses. Movable schools are also conducted in agricultural subjects. Printed lessons are furnished for the movable school.

The college also furnishes correspondence courses in cooking and sewing for those who desire such instruction. A nominal fee, less than the actual cost of examining papers, is charged.

Cornell University well illustrates the possibilities of service by a State institution in extending education for the home; for the year ending October, 1912, the home economics department sent members of its staff to 163 meetings away from the college, where they delivered 237 addresses; 25 demonstrations were given; 1,987 letters connected with extension services were written; there were 20,000 enrolled in the Cornell reading course for the farm home; and 66 local Cornell study clubs were working in neighborhood groups with the lessons sent out from Cornell.

Section 6. UNIVERSITY GRADUATE STUDY IN HOME ECONOMICS.

It is now possible to take the degree of master of arts in 20 American colleges and universities by special graduate study in departments of household science and home economics; and in at least one university, Chicago, it is possible to become a candidate for the degree of doctor of philosophy in a department of household administration. It is thus fair to say that graduate study upon the first level, that of the master's degree, is now pretty generally established or about to be established in American institutions. Registration on the second level, for the doctorate, on the part of those interested in home economics, may be undertaken in the science departments of many universities; an appreciable number of persons interested in home economics have thus become candidates for the doctor's degree in these related fields. Another and significant measure of higher scholastic standards is the increasing number of college instructors in home-economics fields who hold the doctor's degree. The situation as to study for the master's degree and the doctor's degree will be stated in turn.

The master's degree in home economics: Twenty colleges and universities, stated, in response to an inquiry, that they provide, or are prepared to provide, graduate instruction in home economics leading to the degree of master of arts or master of science. The list, with the degree offered, is as follows:

Chicago University, Chicago, Ill., A. M., M. S.; Cornell University, Ithaca, N. Y., A. M., M. S.; Florida State College, Tallahassee, Fla., M. S.; University of Illinois, Urbana, Ill., A. M., M. S.; Kansas State Agricultural College, Manhattan, Kans., M. S.; Michigan Agricultural College, Lansing, Mich., M. S.; University of Minnesota, St. Paul, Minn., M. S.; University of Missouri, Columbia, Mo., A. M.; Montana State College of Agriculture and Mechanic Arts, Bozeman, Mont., M. S.; University of North Dakota, Grand Forks, N. Dak., A. M., M. S.; Ohio State University, Columbus, Ohio, M. S.; Oregon Agricultural College, Corvallis, Oreg., M. S.; Pennsylvania State College, State College, Pa., M. S.; Purdue University, Lafayette, Ind., M. S.; Rhode Island State College, Kingston, R. I., M. S.; Simmons College, Boston, Mass., M. S.; Teachers College, Columbia University, New York, N. Y., A. M.; University of Vermont, Burlington, Vt., A. M.; University of Wisconsin, Madison, Wis., A. M., M. S.

The University of Washington, Seattle, Wash., plans to develop graduate work. Other institutions offer the master's degree for scientific study in fields related to the home, as in economics, chemistry, physiology, bacteriology, economics, and sociology, and thus have doubtless provided graduate opportunities for some persons interested in home economics.

Of these 20 institutions giving the master's degree, 9 are either independent State agricultural colleges or are agricultural divisions of State universities; 5 institutions offer both the master of arts and the master of science degrees; 11 offer the master of science degree; and 3 the master of arts degree alone.

The granting of 27 master's degrees is reported. Of these, 17 are granted by 3 institutions—3 by Chicago University, 10 by Teachers College in 1913, and 4 candidates are reported for the University of Minnesota for 1914. The other master's degrees reported (for 1913, unless otherwise stated) were as follows: Florida State College, 1; University of Illinois, 1; Kansas State College, 1 (1914); University of Missouri, 1; Ohio State University, 4 (to 1913); Purdue University, 1; University of Vermont, 1 in 1911.

A statement furnished as to the graduate courses offered for the master's degree by college departments of home economics showed the following subjects: Household administration, house sanitation, legal and economic position of women, household chemistry, bacteriology, physiological chemistry, nutrition, laboratory methods in nutrition, investigation in nutrition, food supplies and dietaries, household administration, dietetics, experimental cookery, sanitary chemistry, household arts education, foods and cookery, institution management, humanics, and in addition courses described by the generic terms home economics, household economics, domestic science, and seminars.

In addition to these offerings of the master's degree in home economics, all colleges and universities offering graduate study provide in their science departments opportunities for students interested in home economics. Thus, Wellesley College offers a graduate chemistry course in "Problems of food analysis."

The degree of doctor of philosophy in home economics.—Chicago University in 1906 conferred a doctor's degree with registration in its department of household administration for a thesis on the digestibility of starch as affected by cooking.[1] This is the first instance of graduate study in home economics upon the second level, that of the doctorate in an American university. Many universities, of course, provide opportunities for graduate work in the natural and social sciences upon problems which belong in the home economics field through registration in other departments, such as chemistry, physiological chemistry, biology, bacteriology, education, economics, and sociology. It is difficult to make a complete list of opportunities of this kind for advanced graduate study, but some of the institutions which seem particularly available at present are as follows:

University of California, Berkeley, Cal.: Among other departments, those of economics and physiological chemistry.

Yale University, New Haven, Conn.: Departments of physiology, physiological chemistry, and bacteriology and hygiene.[2]

Chicago University, Chicago, Ill.: Primary registration for the doctor's degree may be made in the department of household administration, or a minor may be taken in household administration and a major in another department; in such an arrangement the departments of chemistry, education, hygiene and bacteriology, political economy, and sociology are especially available.

University of Illinois, Urbana, Ill.: A minor for the doctor's degree may be taken in the department of household science; for the major, the departments of bacteriology, chemistry, physiological chemistry, economics, education, and sociology, among others, are available.

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[1] See "Digestibility of starches of different sorts as affected by cooking," Edna D. Day, United States Department of Agriculture.

[2] It is interesting to note that doctorates have been conferred upon persons now serving as college teachers of home economics with thesis subjects as follows: "Nutrition investigations on carbohydrates of lichens, algæ, and related substances"; "The proteolytic enzymes in certain plants"; "The occurrence of purine enzymes in the tissues of the invertebrates and lower vertebrates"; "Fat transportation and metabolism studies with the aid of soluble dye"; "Feeding experiments with mice."

University of Minnesota, St. Paul, Minn: A major has been suggested in biological science and physiological chemistry under the medical school, with a minor in home economics, including nutrition and dietetics; graduate work is also available in sociology, economics, education, and other departments.

University of Missouri, Columbia, Mo.: The departments of bacteriology, chemistry, economics, education, physiology, and sociology provide special opportunities for graduate study for the doctorate.

University of Nebraska, Lincoln, Nebr.: Among others, the department of sociology.

Columbia University, New York, N. Y.: A major registration may be made in education, or food chemistry, or physiological chemistry, which are constituent departments in the household arts departments of Teachers College, and a minor may be taken in these departments or in household administration and economics; other university departments especially available for major or minor study are chemistry, economics, sociology, and social economics.

Cornell University, Ithaca, N. Y.: Departments of chemistry, physiological chemistry, bacteriology, and economics.

Bryn Mawr College, Bryn Mawr, Pa.: Departments of biology, chemistry, and economics.

University of Wisconsin, Madison, Wis.: A minor for the doctorate may be taken in home economics; the major in the departments of chemistry, physiological chemistry, including agricultural chemistry with nutritional investigations, bacteriology, economics, education, entomology, and sociology.

It seems certain that the next few years will see the development of advanced laboratory and field research courses in American universities for the training of college teachers and scientific workers in home economics. With over 250 colleges already teaching home economics and the standard favoring college teachers with the doctor's degree already making itself felt, such training must very evidently be provided. If the proposal to establish experimental work in home economics in the State agricultural experiment stations[1] is approved, this will afford another demand. Experts trained to original investigation in the subjects of food, clothing, shelter, and management have still wider fields in social, philanthropic, and municipal service, in institution management, Government bureaus, and even in industrial and commercial undertakings.

SECTION 7. INSTRUCTION RELATED TO THE HOME IN WOMEN'S COLLEGES.

Many of the colleges for women that have not yet established departments or even courses in "home economics," nevertheless do offer applied-science courses which find their application in the household. There are many instances also in these institutions of vocational courses in fields other than the household, and the inference seems justified that if a college for women finds it possible to give courses in preparation for teaching, or the musical profession, or for civic and philanthropic work, which a few graduates may follow, by so much the more might it offer courses in applied chemistry, economics, or sociology, which have reference to the common experience of most men and women—life in the family group. Matthew Vassar evidently had this type of course in mind when in 1861 he included in his suggested course of study for the projected Vassar College:

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[1] See Part II of this report, Bulletin, 1914, No. 37, pp. 179, 182.

> Anatomy, physiology, and hygiene with practical reference to the laws of the health of the sex; * * * moral science, particularly as bearing on the filial, conjugal, and parental relations; * * * domestic economy, practically taught, so far as is possible, in order to prepare the graduates readily to become skillful housekeepers.

The catalogues of nine women's colleges were examined with regard to courses of vocational significance.

In one case, that of Bryn Mawr College, Bryn Mawr, Pa., a graduate professional school of education has been established. A professional school of household administration might with equal appropriateness be organized in connection with a woman's college, thus proceeding in the direction of a diversified professional education for women upon the collegiate level, just as the engineering and other professional schools for men have developed in the last 50 years about the original colleges for men.

Barnard College, Columbia University, New York City, offers in economics and social science applied courses on "women in industry" and "problems in public health and standards of living"; in physical education, a course in "hygiene, physiology, and public health problems"; and in zoology a course in "vital relations of the human organism"; and Barnard undergraduates are allowed to elect in Teachers College, Columbia University, certain of its courses in education, but not the courses in household arts in the collegiate school of practical arts of Teachers College, Columbia University. Graduates of Barnard College, however, may find in this school of practical arts a university school of household technology offering both undergraduate and graduate courses leading to household, institutional, and commercial vocations related to the home.

Goucher College, Baltimore, Md., offers two courses in the department of physiology and hygiene, with related physical training; a course in philanthropy in the department of economics and sociology; a course in the history and principles of education; and two courses in art criticism. The logic that makes a place for preparation for teaching and for social service demands parallel opportunities for training in woman's more common vocation, that of homemaking.

Mt. Holyoke College, South Hadley, Mass., offers the following applied courses: In botany, "plant culture and landscape gardening"; in chemistry, "foods"; in economics and sociology, "charities and corrections," "American cities"; in education, some 13 courses, in one of which observation work in the public schools is provided; in hygiene and physical training, a course in "hygiene and sanitation," including municipal sanitation with a consideration of foodstuffs, infectious diseases, etc.; in music, 11 courses in theory and 12 courses in practice, of which 8 hours of practical music may be credited toward a degree, provided theoretical work is taken in addition. The remarkable development of 23 courses in music and 13 in education suggests interesting possibilities when the home, as well as the school and technique and appreciation in music, is recognized in professional education.

Radcliffe College, Cambridge, Mass., with instruction identical with that in Harvard University, offers courses with vocational significance as follows: Three in public speaking; one in modern municipal government; in social ethics, five courses, in which the problems of poor relief, the family, temperance, and the labor question, the moral responsibilities of the modern state, social amelioration in Europe, and rural social development are treated; in education, two courses for undergraduates and four for graduate students; in fine arts one for undergraduates and four for graduates; in music, four courses for undergraduates and one for graduates. The offering of instruction related to the home in the department of social ethics indicates what might be done in the way of education for the home were well-considered applied science courses organized in the several departments of economics, sociology, chemistry, biology, etc.

Smith College, Northampton, Mass., offers the following applied courses: In education, six courses, in two of which there is opportunity for school visiting; in economics and sociology, courses in charities and corrections and in present social problems dealing with conditions affecting the welfare of the laboring class, with housing, immigration, and social insurance; in elocution, 11 courses; in music, 11 theoretical courses and 8 practical courses, credit in which is allowed within the minimum of hours, provided the practice work is sufficiently advanced, and is accomplished by theoretical work for one year. Not more than two hours of practical work each year may be counted within the minimum of hours; in art, four practical courses, which when combined with historical and theoretical courses are credited as in music; in chemistry lectures on the application of chemical facts to common life, also a course in sanitary chemistry with reference to public health, including analysis of air, water, and food, chemistry of microorganisms; in botany, courses in bacteriology and other phases of microbiology in relation to health and other public interests, and in horticulture, advanced horticulture and landscape gardening (see p. 106); in physical training, 10 courses, which do not count in the record of hours.

The extensive offering in elocution, music, and art is doubtless based on the exclusively cultural view of women's education, but such instruction has a vocational significance; the work in education has, of course, the direct vocational end point—a parallel department of household administration in a women's college would seem to have equal justification, and would certainly have an equal, if not wider, practical bearing with the student body.

Vassar College, Poughkeepsie, N. Y., offers the following applied courses: In economics and sociology, a course on charities and corrections; in chemistry, courses in "physiological chemistry," with special reference to food materials, food analysis, quality of foods, and adulterants; and "application of chemistry to food and sanitation," which is intended to give "a basis for intelligent consideration of the chemical aspect of problems involved in public and private hygiene, especially valuable for those interested in sociology and wishing to equip themselves for public service." In physiology and hygiene, in addition to freshman lectures and a course in human physiology, there is a course in municipal and house sanitation, open to juniors and seniors, which "deals with the principles of modern sanitation, and comprises such subjects as water supply, sewage and garbage disposal, construction of habitations, and the hygiene of transmissible diseases." These beginnings in applied courses suggest the possibilities of instruction related to the home when the ideas of Matthew Vassar are fully carried out.

Wellesley College, Wellesley, Mass., offers the following applied courses: In chemistry, air, water, food analysis; in economics and sociology, a course in social economics presenting a study of dependent, defective, and delinquent classes, with visits to designated institutions; a second course in social economics, treating such normal social needs as housing, sanitation, education, and recreation, using the North End Settlement House of Boston for observation; and a course in "the economics of consumption," dealing with the theoretical and practical aspects of the use of wealth, in which "some or all of the following topics will be discussed: The division of public and private incomes between use as capital and use for immediate consumption (functions and limits of saving), 'Engel's Laws,' standards of living, workingmen's budgets and the minimum wage, Veblen's theory of conspicuous consumption, the rôle and social limits of luxury, final utility, and its relation to expenditure. The function of women in directing household expenditure will be considered throughout." In education, four courses are offered, with an opportunity in one for observation of high-school work, and a requirement of a systematic practice teaching in the high school; in elocution, three courses; in hygiene and physical education, 20 courses, prescribed for the two years' course, leading to the certificate of the department, which is especially designed for the training of teachers of hygiene and physical education; in music, theoretical courses and also practical music, including instrumental and vocal, with credits toward the A. B. degree restricted to applied harmony, history, and counterpoint, although a certificate of the department of music is given which requires practical work. The work at Wellesley College in education, physical education, and music, including practice work in each field, and the applied courses in chemistry and economics, some of which bear directly upon the household, again suggest the possibilities of a department of household administration.

The Women's College of Brown University, Providence, R. I., offers two technical courses in art, given at the Rhode Island School of Design, in addition to its own theoretical courses and four courses in education.

What these colleges have already done in the organized courses in education, including the graduate school of education at Bryn Mawr, affords the best example of what these women's colleges might do in the field of household administration. The foundation of well-equipped schools of household technology, affiliated with a women's college, as our schools of engineering, law, and medicine have grown up about the men's colleges, may be the ultimate type of organization in this field. Such a school of household administration adequately equipped and endowed is an undertaking comparable to a school of engineering for men, and is not to be undertaken lightly or without large financial resources. A feasible first procedure, however, in any college or university would be to offer applied courses in economics, sociology, chemistry, and ethics which together would make up a program of household administration study. Such courses open to college women in the junior or senior year, or grouped as a graduate year of study, would provide opportunity for vocational study, in addition to the cultural course of the college, in the principles underlying the processes of the household, and of related institutional and commercial enterprises, as school and commercial lunch rooms, diet kitchens, hospitals, orphanages, dormitories, and other institutional households.

That progress may come with regard to wider opportunities in education for the home in women's colleges is suggested by the report of a committee of the New York branch of the Association of Collegiate Alumnæ in 1910, which recommends that the curriculum of women's colleges be modified in the direction of vocations by the introduction of required courses in hygiene, biology, and bacteriology, and applied sociology—legislation, property, social and domestic relations from the point of view of women's interests; and that further elective courses in the physical and psychological hygiene of childhood and in political science be provided.[1]

In this connection the following statement regarding applied-science courses in women's colleges, furnished by Prof. W. F. Ganong, of Smith College, is of interest:

> It will be granted, no doubt, that the ideal courses for a college curriculum are those in which the method permits intellectual training, while the subject matter has important practical application. The science of botany offers some such courses, which have been tested well at Smith College. The most important is a course in horticulture and landscape gardening. In this the students do systematized laboratory work, under the supervision of a skilled gardener, in the principal gardening operations—the propagation of plants by seeds, cuttings, grafting, and other methods; the use of soils and fertilizers; watering, pruning, potting and forcing, crossing and hybridizing, etc. An essential feature of the work is the simultaneous study, under a specialist in plant physiology, of the scientific principles—chemical, physical, and physiological—underlying these operations.
>
> The students try experiments to test the principles and connect them with the practical operations. This work occupies two terms of a year, and the third is given to the elements of landscape gardening. Here the students learn from observation of examples out of doors, supplemented by study of graded series of diagrams, photographs, etc., the ideas underlying the correct use of plants in combination with walks and drives, lawns and buildings, for the beautifying of home and public grounds. Along with this work, as likewise in the earlier part of the year, the students are learning, by the usual methods of identification, etc., to know the principal kinds of cultivated plants, both of indoors and outdoors.
>
> The course throughout is carried on in the spirit and by the methods of the scientific laboratory, while its subject matter has obviously a perfectly direct bearing upon an important part of woman's work in the home and the community. It does not, naturally, make her either an expert gardener or a landscape architect, but it does show her what there is in those subjects, their standards, and the methods of their study; and it enables her to take an intelligent and helpful interest not only in the improvement of her own home but also in the development of school grounds and other civic improvements involving plants and landscape matters. Above all, it gives her a sound basis for continuing the study by herself if she wishes.
>
> An advanced course in landscape gardening is given in the same spirit. It is not designed for professional purposes, but for further training in appreciation of landscape subjects for individual and civic benefit.
>
> In precisely the same spirit, also, a course is given in bacteriology and allied phases of the biology of minute organisms, in relation to their bearing upon both personal and public hygiene, and economics. This course, likewise, offers the possibility of the most rigid scientific training in conjunction with the acquisition of knowledge having direct utility both to the individual and, through her, to the community in which she lives.

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[1] Association of Collegiate Alumnæ, Feb., 1910, p. 37.

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EDUCATION FOR THE HOME

By BENJAMIN R. ANDREWS
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TEACHERS COLLEGE, COLUMBIA UNIVERSITY

PART IV

LIST OF REFERENCES ON EDUCATION FOR THE HOME
CITIES AND TOWNS TEACHING HOUSEHOLD ARTS

DEPARTMENT OF THE INTERIOR

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LIST OF REFERENCES ON EDUCATION FOR THE HOME.

Part I of the report on "Education for the Home" (Bulletin, 1914, No. 36) consisted of an introduction and summary for the investigation, together with a list of equipment for household arts instruction; Part II (Bulletin, 1914, No. 37) described in detail education for the home in respect to State legislation, elementary schools, high schools, normal schools, technical institutes, and various agencies and organizations; Part III (Bulletin, 1914, No. 38) treated of the college and university work in household arts and related fields; Part IV, the present section of the report, attempts to provide a background of general and specific literature on education for the home, with an appended list of cities and towns teaching household arts.

1. BIBLIOGRAPHIES.

Bibliography of current home economics literature. Journal of home economics, each issue, Roland Park, Baltimore, Md.

Boston. Public library. List of books on domestic science in the public library of the city of Boston. Boston, Public library, 1911. 78 p. 4°.

Chicago. Public library. Books on domestic economy. Chicago, 1906.

Columbia university. Teachers college. School of household arts. Annotated list of books relating to household arts. new ed. New York, Teachers college, Columbia university, 1914.

Home economics. A bibliography for high schools prepared by the Department of home economics of the State college of Washington. Pullman, Wash., Published by the State college of Washington, 1913. 23 p.

Langworthy, Charles F. State and municipal documents as sources of information for institution managers and other students of home economics. Journal of home economics, 4: 59–73, February, 1912.

Shaw, Robert Kendall. Bibliography of domestic economy, in English. Albany, University of the State of New York, 1901. (31)–170 p. 8°. (New York state library. Bulletin 52, January, 1901.) Cover-title.

Covers literature of 1850–99, inclusive.

United States. Bureau of education. Bibliography of education in agriculture and home economics. Washington, Government printing office, 1912. 62 p. 8°. (Bulletin, 1912, no. 10.)

2. PERIODICALS.

American cookery (formerly Boston cooking school magazine). Pub. monthly. Boston, Boston cooking school magazine co. $1 a year.

Child welfare magazine. Pub. monthly. Philadelphia, J. B. Lippincott & co. Official organ of Mothers congress and Parents-teachers associations. $1 a year.

Home progress magazine. Dedicated to the enrichment of family life through the Home progress society. Elizabeth McCracken, editor. Pub. monthly. Boston, Houghton, Mifflin co. $3 a year.

Housewives league magazine. New York. Organ of the National housewives league. $1 a year.

Journal of home economics. Pub. monthly. Roland Park, Baltimore, Md., American home economics association. 500 p. a year, $2.

Manual training and vocational education. Pub. monthly. Peoria, Ill., Manual arts press. $2 a year.

The Survey. A journal of constructive philanthropy. Pub. weekly. New York, 105 East 22 st. $3 a year.

3. SYLLABUSES.

Altoona, Pa.: Book of recipes for the domestic science department of the Altoona High school, by Zitella Wertz. 1913. p. 85.

American home economics association. Syllabus of home economics. Roland Park, Baltimore, Md., 1913. 69 p. paper, 50 cents; cloth, $1.

Birmingham, Ala. Board of education. Courses of study and regulations for high schools, 1913–14.

District of Columbia. Board of education. Outline course of study in manual training department. Washington, D. C., 1910. 6 p.

England. London county council. Syllabus of instruction in domestic economy. London, 1912.

Revised March, 1912.

Ethical culture school, New York City. Course of study in domestic art. 1909. 14 p. 4°.

Frich, Lilla. Basic principles of domestic science, Minneapolis public schools. Rev. ed. Muncie, Ind., published by Muncie normal institute, 1913. 200 p. illus. 4°.

Fuller, Alice M. Housekeeping and household arts: A manual for work with the girls in the elementary schools of the Philippine Islands. Manila, Bureau of printing, 1911. 178 p. 16 pl. 8°. (Bureau of education. Bulletin no. 35.)

Illinois. State normal university, Normal, Ill. Home economics. Normal, Ill., Illinois State normal university, 1910. 24 p. 8°. (Normal school quarterly, series 8, number 34, January, 1910.)

——— A syllabus of household science and household art. 1910–11. 61 p. 8°.

Indiana. Department of public instruction. Tentative course of study in industrial subjects for the public schools of Indiana. Indianapolis, 1913. p. 51, 80. (Bulletin no. 2.)

——— ——— Helps for domestic science work in seventh and eighth grades. November-December. Indianapolis, 1914. 22 p. 8°.

Iowa. Department of public instruction. Normal training course in four-year high schools. Des Moines, 1913. 179 p. 8°.

Los Angeles, Cal. City school district. Courses of study for the high and intermediate schools, 1913–14.

Maine. Educational department. Courses of study for elementary schools. No. 4 Household science. 19 p. 8°.

Minneapolis, Minn. Board of education. Basic principles of domestic science.

Mulligan, Catherine A., *ed.* A brief course in domestic science for State institutes of Tennessee. Knoxville, Tenn., University of Tennessee, 1913. 54 p. 8°.

Nebraska. Department of public instruction. Domestic science. Crete plan. Lincoln, Department of public instruction, 1911. 24 p. 8°.

New Hampshire. Department of education. Industrial education in New Hampshire. Reprint from report of superintendent of public instruction, 1912. 31 p. 6 pl. 8°.

——— ——— Standard program of studies for the secondary schools. 2d ed. Concord, N. H., 1912. p. 243.

New Mexico. Department of education. Course of study in industrial education, including domestic science, manual training, and agriculture. Santa Fe. 52 p.

New York City. Department of education. Course of study and syllabuses in sewing and cooking for the elementary schools, 1911. 19 p. 8°.

New York (State). State education department. Elementary syllabus of manual and household arts. Agriculture. Albany, N. Y., 1910. 255 p. illus. 8°.

Pennsylvania. Department of public instruction. Household arts schools, departments and evening classes. Harrisburg, Pa., 1913. 18 p. 8°.

Philadelphia. Public schools. Course of instruction in sewing, including pattern drafting for the girls of the elementary schools of Philadelphia. Philadelphia, 1912. 8 p. 8°.

——— ——— Elementary lessons in domestic science. Course of instruction in cooking. Philadelphia, 1913. 92 p. illus. 8°.

St. Louis, Mo. Public schools. Outline of lessons in cooking for the district schools. St. Louis, 1910. 54 p. 2 pl. 8°.

St. Paul, Minn. Board of school inspectors. Courses of study.

Tobin, Helen H., *and* Ewing, Ariel M. A suggestive course of study in sewing for the elementary and secondary schools of Oregon and a suggestive two-year course of study in domestic art for the high schools of Oregon. 26 p. 24°. (Oregon agricultural college. School of domestic science and art. Bulletin, series 1, no. 58.)

Topeka, Kans. Topeka public schools. Outline of the course in sewing for the elementary schools. Topeka, 1910. 23 p. 8°.

United States. Interior Department. Office of Indian Affairs. Outline lessons in housekeeping, including cooking. laundering, dairying, and nursing, for use in Indian schools. Washington, Government printing office, 1911. 23 p. illus. 8°. 5 cents.

——— ——— ——— Some things that every boy should know how to do and hence should learn to do in school. Washington, Government printing office, 1911. 48 p. illus. 8°. 15 cents.

——— ——— ——— Some things that girls should know how to do and hence should learn how to do when in school. Washington, Government printing office, 1911. 23 p. 8°. 5 cents.

——— ——— ——— Teaching rudiments of cooking in classroom; primary methods and outlines for use of teachers in Indian schools. Washington, Government printing office, 1906. 62 p. 8°. 10 cents.

Washington. Department of education. Domestic education. Prepared by F. F. Nalder, Deputy state superintendent of public instruction. Olympia, Wash. p. 143–48. (High school manual, 1914.)

Wisconsin. Department of education. Manual of the free high schools of Wisconsin. 7th ed. rev. C. P. Carey, state superintendent . . . Madison, 1914. 203 p. 8°.

See p. 13–14, 160–168.

——— ——— Suggestions and requirements for teaching of agriculture, manual training, cooking, and sewing in state graded schools. C. P. Carey, state superintendent . . . Madison, 1914. 48 p. 8°.

——— ——— Suggestions for teaching cooking and sewing in the country schools of Wisconsin. C. P. Carey, state superintendent. 16 p. 8°.

SYLLABUSES: HIGH SCHOOLS.

Brookline, Mass. Courses in domestic science offered by the high school. 13 p. 8°.

Chicago, Ill. Board of education. Department of household arts. A course of study for high schools. Chicago, 1912. 26 p. 4°.

Denver, Colo. Board of education. The manual training high-school courses of study.

Revised, 1912.

District of Columbia. Board of education. Outline course of study in domestic-science department. Washington, D. C., 1908–9. 4 p. 8°.

Emporia, Kans. Board of education. Courses of study in high school, 1911–12.

Illinois university. Syllabus of domestic science and domestic art for the high schools of Illinois. Urbana, Ill.

Minneapolis, Minn. Public schools. Domestic-science high-school course. Minneapolis, 1912. 95 p. 8°.

——— ——— ——— Pamphlet 2. Carbohydrates. 52 p. 8°.

——— ——— ——— Pamphlet 3. Proteids. 52 p. 8°.

Minnesota. Department of public instruction. Industrial course for consolidated schools of Minnesota. St. Paul, Minn, 1913. 11 p. 8°. (Bulletin no. 42.)

New York City. Department of education. Domestic science. Syllabus for high schools. 11 p. 8°.

Adopted by the Board of superintendents, June, 1911.

4. GENERAL WORKS.

Address list for illustrative materials and laboratory supplies for instruction in household arts. New York, Teachers college, 1914. 16 p. 10 cents.

Andrews, Benjamin R. Catherine E. Beecher, the pioneer in home economics. Journal of home economics, 4 : 211 (1912).

Bevier, Isabel, *and* Usher, Susannah M. The home economics movement. Part I. Boston, Whitcomb & Barrows, 1906. 67 p. 12°.

Bonser, Frederick G. Fundamental values in industrial education. *In* Russell-Bonser. Industrial education. New York, Teachers college, 1913. 65 cents. Paper 30 cents.

Burstall, Sara A. Home economics. Domestic science and art for women and girls in American colleges and schools. *In her* Impressions of American education in 1908. London, New York (etc.), Longmans, Green and co., 1909. p. 199–219.

Campbell, Helen. Household economics: A course of lectures in the school of economics in the University of Wisconsin. New York, G. P. Putnam's sons. 1897. xxi, 286 p. 8°.

Cooley, Anna M. Domestic art in women's education; for use of those studying the method of teaching domestic art and its place in the school curriculum. New York, C. Scribner's sons, 1911. 274 p. 12°.

Great Britain. Board of education. School training for the home duties of women. . . . Presented to both houses of Parliament by command of His Majesty, London, Printed for H. M. Stationery office, by Wyman & sons, limited, 1905–07. 3 v. illus. 8°. ([Parliament. Papers by command.] Cd. 2498, 2963, 3860.)

Part I contains "the teaching of 'domestic science' in the United States of America, by Alice Ravenhill: 1. State institutions. 2. Private institutions. 3. Social agencies for the promotion of domestic science teaching."

Harvey, Lorenzo Dow. A school for home makers. Washington, Government printing office, 1912. 313–29 p. 8°.

The home economics movement in the United States. Definitions. Journal of home economics, 3: 323 (1911).

Household arts in education. *In* A cyclopedia of education. Ed. by Paul Monroe. v. 3. New York, Macmillan co., 1912. p. 318–32.

Bibliography: p. 331–32.

Hunt, Caroline L. The life of Ellen H. Richards. Boston, Whitcomb & Barrows, 1912. 8°.

Indiana. Commission on industrial and agricultural education. Report. Indianapolis, Ind., 1912. 134 p.

——— Department of public instruction. The training and certification of teachers for agricultural, industrial, and household arts subjects in the public schools of Indiana. Indianapolis, Ind., 1914. 36 p.

Jessup, Walter A. Domestic science. *In his* The social factors affecting special supervision in the public schools of the United States. New York, Teachers college, Columbia university, 1911. p. 51–63.

Kinne, Helen. Equipment for teaching domestic science . . . with a chapter on the School of household arts, Teachers college, Columbia university. New York, Columbia university press, 1909. 96 p. illus. 8°.

Third edition, published by Whitcomb and Barrows, Boston, Mass., 1911, includes a chapter on Portable equipment for lectures, by Anna Barrows. "This book contains 31 illustrations of model rooms and equipment for teaching domestic science, and 33 diagrams of floor plans, school kitchens, tables, cupboards, stoves, hot plates, etc."

Lake Placid conference on home economics. Proceedings of the annual conference. 1–10, 1899–1908. Essex county, N. Y., Lake Placid club, 1899–1908. 10 v. 8°.

Address: American home economics association, Roland Park, Baltimore, Md.

Larned, Linda H. The national household economic association, 1893–1903. Journal of home economics, 1: 185 (1909).

Leiper, M. A. Teaching language through agriculture and domestic science. Washington, Government printing office, 1912. 30 p. 8°. (U. S. Bureau of education. Bulletin, 1912, no. 18.)

Ravenhill, Alice, *and* Schiff, Catherine J., *eds.* Household administration, its place in the higher education of women. New York, Henry Holt & co., 1911. 324 p. 8°.

Richards, Ellen. Influence of industrial arts and sciences upon rural and city home life. From the standpoint of domestic science. *In* National education association of the United States. Journal of proceedings and addresses, 1909. p. 636–39.

——— The social significance of the home economics movement. Journal of home economics, 3: 117 (1911).

Spethmann, Marie T. Institutions in the United States giving instruction in home economics. Journal of home economics, 3: 269 (1911).

Talbot, Marion. The education of women. Chicago, University of Chicago press. 266 p. 8°. $1.25.

——— The vocational and cultural value of domestic science. Journal of home economics, 5: 232 (1913).

Trowbridge, Ada Wilson. The home school. Boston, Houghton Mifflin co.

United States. Bureau of education. Cooking schools, etc. *In its* Industrial education in the United States. Washington, Government printing office, 1883. p. 285–99. 8°.

Contains: New York school of cookery, by Juliet Corson; Work of Miss Parloa; and Cooking schools in the South, by Helen Campbell.

——— Commission on national aid to vocational education. Report, together with the hearings held on the subject. 2 v. Washington, Government printing office. 8°. (63 Cong., 2d sess. H. of R. Doc. no. 1004.)

——— ——— Training schools of cookery. Washington, Government printing office, 1879. 49 p. 8°. (Circular of information, 1879, no. 4.)

Work, Cree T. The importance of instruction in arts and sciences for home life. *In* National education association of the United States. Journal of proceedings and addresses, 1909. p. 628–36.

KITCHEN GARDEN.

Colson, Elizabeth, *and* Chittenden, Anna G. The child housekeeper; simple lessons, with songs, stories and games. Music by Alice R. Baldwin. New York, 1903. illus.

Huntington, Emily. How to teach kitchen garden or object lessons in household work, including songs, plays, exercises, and games illustrating household occupations. Garden City, N. Y., Doubleday, Page & co., 1901. 168 p. 12°.

Keech, Mabel L. Training the little housekeeper by kitchen garden methods. Philadelphia, 1912. 77 p.

ELEMENTARY AND SECONDARY SCHOOLS.

Holt, Elizabeth G. Negro industrial training in the public schools of Augusta, Ga. Journal of home economics, 4: 315 (1912).

Lake Placid conference on home economics. Report of special committee on . . . home economics in elementary and secondary schools. Appended to its Proceedings of the first, second, and third conferences, 1899–1901. 24 p.

Norton, Alice P. Home economics from the standpoint of the grade teacher. Journal of home economics, 3: 431 (1911).

The place of vocational subjects in the high school curriculum. *In* National society for the scientific study of education. Fourth yearbook, 1905. Part II. Chicago, University of Chicago press.

Richards, Ellen H. The present status and future development of domestic science courses in the high schools. *In* National society for the study of education. Fourth yearbook. Part II. 1905.

Snow, Mary S. The place of domestic economy in the curriculum. *In* Western drawing and manual training association. Proceedings, 1908. p. 40–44.

Teaching of domestic art and division of subject matter in elementary and secondary schools. *In* Lake Placid conference on home economics. Proceedings, 1908. p. 85–91.

Tibbits, Henry S. The progress and aims of domestic science in the public schools of Chicago. *In* National education association of the United States. Journal of proceedings and addresses, 1901. p. 257–61.

HIGHER EDUCATION.

Chown, Alice A. Courses in home economics for colleges and universities. *In* Lake Placid conference on home economics. Proceedings, 1901. p. 105.

Euthenics in college and university education. *In* Lake Placid conference on home economics. Proceedings, 1905. p. 70–90.

Home economics in higher education. *In* Lake Placid conference on home economics. Proceedings, 1903. p. 65–71. Appendix.

Practical suggestions from the Lake Placid conference on courses of study in home economics in higher education. *In* Lake Placid conference on home economics. Proceedings, 1904. p. 77.

Smith, Mary R. Report of committee on courses of study in home economics in colleges and universities. *In* Lake Placid conference on home economics. Proceedings, 1902. p. 17, 70.

Stone, W. E. A degree course in home economics. *In* Association of American agricultural colleges and experiment stations. Proceedings, 1905. p. 92–96. (U. S. Department of agriculture. Office of experiment stations. Bulletin no. 164.)

EDUCATION FOR THE RURAL HOME.

Barrows, Anna. Extension work in home economics through agricultural agencies. Journal of home economics, 5: 60 (1913).

Bishop, E. C. Relation of rural school to better housekeeping. *In* National society for the scientific study of education. Tenth yearbook. p. 29–33.

Buell, Jennie. One woman's work for farm women. Boston, Whitcomb & Barrows.

Caldwell, Otis W. Home economics and rural extension. Journal of home economics, 6: 99 (1914).

Connecting the school with the farm home. Journal of home economics, 5: 203 (1913).

Reprinted from U. S. Department of agriculture. Office of Experiment stations. Annual report 1911.

Hamilton, John. Farmers' institutes for women. Washington, Government printing office, ——. (U. S. Department of agriculture. Office of experiment stations. Circular, 85.)

——— Form of organization for movable schools of agriculture. Washington, Government printing office, 1908. 8 p. 8°. (U. S. Department of agriculture. Office of experiment stations. Circular, 79.) 5 cents.

——— History of farmers' institutes. Washington, Government printing office, 1906. (U. S. Department of agriculture. Office of experiment stations. Bulletin 174.) 15 cents.

Hurd, William D. The relation between college and university departments of home economics and the outside community. Journal of home economics, 2 : 257 (1910).

Johnson, A. A. Country schools of agriculture and domestic economy in Wisconsin. Washington, Government printing office, 1911. 24 p. illus. 8°. (U. S. Department of agriculture. Office of experiment stations. Bulletin 242.) 10 cents.

McKeever, William H. Farm boys and girls. New York, Macmillan co. $1.50.

National society for the scientific study of education. The rural school as a community center. 10th yearbook. Part II. Chicago, University of Chicago press.

Putnam, George A. The women's institutes of the province of Ontario. Journal of home economics, 5 : 197 (1913).

Salm, M. Traveling cooking schools for rural regions in Germany. Journal of home economics, 1: 164 (1909).

United States. Department of agriculture. Boys and girls clubs. (Farmers' bulletin 385.)

——— ——— Farm home grounds. (Farmers' institute lectures, nos. 12 & 14.)

Syllabuses of illustrated lectures, with lantern slides.

——— ——— Bureau of plant industry. Girls' demonstration work: The canning clubs. January 20, 1912. Washington, Government printing office, 1912.

——— ——— Office of experiment stations. Educational contests in agriculture and home economics for use in farmers' institute and agricultural extension work. Washington, Government printing office, 1913. 47 p. 8°. (Bulletin 255.) 5 cents.

——— ——— ——— Farmers' institutes for young people. Washington, Government printing office, 1910. 40 p. 8°. (Circular 99.) 5 cents.

Van Rensselaer, Martha. Extension work in home economics. Journal of home economics, 1 : 156 (1909).

Van Zile, Mary P. Home economics extension work in Kansas. Journal of home economics, 4 : 155 (1912).

EDUCATION OF CHILDREN'S NURSES.

Read, Mary L. Professional training of children's nurses. *In* National society for the study of education. Ninth yearbook. Part I. 1910.

5. SUBJECT MATTER—WITH TEXT AND REFERENCE BOOKS.

GENERAL WORKS.[1]

Addams, Jane. The spirit of youth and the city streets. New York, Macmillan co. 162 p. $1.25.

Barnes, Earl. Woman in modern society. New York, B. Huebsch. 12°. $1.25.

Bosworth, Louise M. The living wage of women workers. A study of incomes and expenditures for 450 women workers in the city of Boston. Philadelphia, American academy of political and social science, 1911. 90 p. 75 cents.

Breckenridge, Sophonisba P., *and* Abbott, Edith. The delinquent child and the home. New York, Survey associates. 360 p. ill. $2.

Bruere, M. B., *and* R. W. Increasing home efficiency. New York, Macmillan co. $1.50.

Byington, Margaret F. Homestead: The households of a mill town. New York, Survey associates. 312 p. illus. 8°. $1.50.

Campbell, Helen. Household economics, a course of lectures in the school of economics of the University of Wisconsin. New York, G. P. Putnam's sons. 8°. $1.50.

Chapin, Robert Coit. Standard of living among workingmen's families in New York city. New York, Survey associates. 388 p. 8°. $2.

Clark, Walter E. The cost of living. Chicago, A. C. McClurg. (In preparation.)

Creighton, Louise H. The economics of the household. Six lectures at the London school of economics. London, 1907.

Dealey, J. Q. The family in its sociological aspects. Boston, Houghton Mifflin co. 16°. 75 cents.

Devine, Edward T. The economic function of woman. New York, Teachers college, 1910. (Bulletin no. 1.) 10 cents.

——— Family and social work. New York, Association press. 60 cents.

Ellwood, Charles A. Sociology and modern social problems. New York, American book co. $1.

Contains valuable chapters on the family.

Forsythe, Peter T. Marriage: its ethics and its religion. New York, George H. Doran co. 12°. $1.25.

Gillette, John M. The family and society. Chicago, A. C. McClurg. 50 cents.

Gilman, Charlotte P. The home. New York, Charlton co. $1.

——— Woman and economics. Boston, Small, Maynard & co., 1900. $1.50.

Goodholme, Todd S., *ed.* Goodholme's domestic cyclopedia of practical information. New York, Charles Scribner's sons. illus. $5.

Goodsell, Wyllistine. The history of the family as a social institution. New York, Macmillan co. (In preparation.)

Hiller, Gustavus E. The christian family. New York, Methodist book concern. 12°. $1.25.

Hillis, *Mrs.* Newell Dwight. American woman and her home. New York, Fleming H. Revell co. 12°. $1.

Howard, George E. The family and marriage: an analytical reference syllabus. Lincoln, Nebr., University of Nebraska, 1914. 75 cents.

——— A history of matrimonial institutions, chiefly in England and the United States. 3 vols. Chicago, University of Chicago press, 1904. $10.

Hunt, Caroline L. Home problems from a new standpoint. Boston, Whitcomb & Barrows. 145 p. $1.

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[1] See also Household management—general works, p. 28.

Jordan, W. G. Little problems of married life. New York, Fleming H. Revell co. $1.

Key, Helen. The century of the child. New York, G. P. Putnam's sons. 8°. $1.50.

Lee, Porter R. Family rehabilitation. New York, Russell Sage foundation. 16 p. 70 cents per 100.

Lofthouse, W. F. Ethics and the family. New York, Hodder & Stoughton. 8°. $2.50.

Mason, Otis T. Woman's share in primitive culture. New York, D. Appleton & co. illus. 12°. $1.75.

Nearing, Scott. Financing the wage-earner's family. New York, B. W. Huebsch. $1.25.

——— *and* Nearing, Nellie M. S. Woman and social progress. A discussion of the biologic, domestic, industrial, and social possibilities of American women. New York, Macmillan co., 1912. 281 p. $1.50.

Parsons, Elsie Clews. The family. New York, G. P. Putnam's sons. $3.

Richards, Ellen H. Euthenics, the science of controllable environment. Boston, Whitcomb & Barrows. $1.

——— The art of right living. Boston, Whitcomb & Barrows. 50 p. 50 cents.

——— The cost of living as modified by sanitary science. New York, John Wiley & sons. 156 p. $1.

Richardson, Bertha June. The woman who spends. Boston, Whitcomb & Barrows. 161 p. $1.

Robins, J. B. The family, a necessity of civilization. New York, Fleming H. Revell co. 12°. $1.25.

Salmon, Lucy M. Domestic service. New York, Macmillan co. $2.

——— Progress in the household. Boston, Houghton Mifflin co. 12°. $1.10.

Schreiner, Olive. Woman and labor. New York, Frederick A. Stokes co. 12°. $1.25.

Spencer, Anna Garlin. Woman's share in social culture. New York, Mitchell Kennerley. 331 p. 12°. $2.

Stocking, Jay T. The dearest spot on earth. New York, Dodge publishing co. $1.

Streighthoff, Frank H. Standard of living among the industrial people of America. Boston, Houghton Mifflin co., 1911. 196 p. $1.

Talbot, Marion, *and* Breckinridge, S. P. The modern household. Boston, Whitcomb & Barrows. $1.

Tarbell, I. M. The business of being a woman. New York, Macmillan co. $1.25.

Thwing, Charles F., *and* Butler, Carrie F. The family: an historical and social study. Boston, Lothrop, Lee & Shephard co. $1.60.

Todd, Arthur James. The primitive family as an educational agency. New York, G. P. Putnam's sons. $1.75.

Veblen, Thorstein. The theory of the leisure class. New York, Macmillan co., 1897. $2.

Ware, J. F. W. Home life, what it is and what it needs. Boston, Lothrop, Lee & Shephard co. $1.

Westermarck, Edward A. History of human marriage. 3d ed. New York, Macmillan co., 1902. $4.50.

Wilson, Jennie L. The legal and political status of women in the United States. Cedar Rapids, Iowa, 1912.

Xenophon. The Economist. Trans. into English by Wedderburn *and* Collingwood. Ed. by John Ruskin. London, 1876.

SCIENCE APPLIED TO THE HOUSEHOLD.

Bacteriology.

Buchanan, E. D., *and* R. E. Household bacteriology for students in domestic science. New York, Macmillan co. $2.25.

Conn, H. W. Bacteria, yeasts, and molds in the home. New York, Ginn & co. 295 p. 12°. $1.

Elliott, S. Maria. Household bacteriology. Chicago, American school of home economics. $1.50.

Marshall, C. E., *ed.* Microbiology for agricultural and domestic science students. Philadelphia, P. Blackiston's son & co. xxi, 724 p. $2.50.

Reed, Howard S. A manual of bacteriology for agricultural and domestic science students. New York, Ginn & co. 179 p. 8°. $1.25.

Chemistry.

Allyn, Lewis B. Elementary applied chemistry. New York, Ginn & co. 127 p. 12°. 60 cents.

Bailey, E. H. S. A textbook of sanitary and applied chemistry. New York, Macmillan co. 345 p. 12°. $1.40.

Blanchard, J. M. Household chemistry. Boston, Allyn & Bacon, 1912. 50 cents.

Brownlee, Fuller, Hancock, *and* Whitsit. The chemistry of common things. Boston, Allyn & Bacon. (In press.)

Dodd, Margaret E. Chemistry of the household. Chicago, American school of house economics. $1.50.

Henwood, A., *and* Griffin, F. H. Laboratory work in applied chemistry for students of domestic science. Philadelphia, Drexel institute, 1912. 62 p. $1.50.

Lassar-Cohn. Chemistry in daily life. Philadelphia, Lippincott & co. 12°. $1.75.

Norris, James F. The principles of organic chemistry. New York, McGraw-Hill book co., 1912. xv, 579 p. $2.50.

Richards, Ellen H., *and* Elliott, S. Maria. The chemistry of cooking and cleaning. Boston, Whitcomb & Barrows. 186 p. $1.

Sadtler, S. S. Chemistry of familiar things. (In press.) Philadelphia, J. B. Lippincott co.

Snell, John F. Elementary household chemistry. New York, Macmillan co. $1.25.

Vulté, H. T. Household chemistry. New York, H. T. Vulté. 189 p. $1.50.

Physics.

Butler, Alfred M. Household physics. Boston, Whitcomb & Barrows. $1.30.

Keene, E. S. Mechanics of the household. Agricultural college, N. D., E. S. Keene, 1913.

Lynde, C. J. Physics of the household. New York, Macmillan co. $1.25.

GENERAL SCHOOL TEXTS.

(See also under other sections: Foods, p. 15; Sewing, p. 27; and Management, p. 28.)

Bidder, Marion Greenwood, *and* Baddeley, Florence. Domestic economy in theory and practice. New York, G. P. Putnam's sons. 8°. 90 cents.

Campbell, M. G. A textbook of domestic science for high schools. New York, Macmillan co. 90 cents.

Clark, Ida Hood. Domestic science. Boston, Little, Brown & co. 300 p. $1.

Flagg, Etta Proctor. A handbook of home economics (for the grammar grades). Boston, Little, Brown & co. 75 cents.

Gibbs, W. S. Elements of domestic science. Philadelphia, J. B. Lippincott co. (In press.) Tentative price, $1.

Jones, R. Henry. Experimental domestic science. Philadelphia, J. B. Lippincott co. 12°. 80 cents.

Kinne, H., *and* Cooley, Anna M. Foods and household management, shelter and clothing. 2 vols. New York, Macmillan co., 1913. $2.20.

Morris, Josephine. Household science and arts for elementary schools. New York, American book co. 60 cents.

Wilson, L. L. W. Domestic science manual. New York, Macmillan co. $1.

——— Domestic science reader. New York, Macmillan co. 60 cents.

——— Longman's household science readers. Book I. New York, 1901. illus.

FOODS—TEACHING.

Greer, Carlotta C. How to apply the laboratory methods of study to practical cooking in high schools. Journal of home economics, 2: 605 (1910).

Jacobs, Emma S. Practical methods in a household arts lesson. Journal of home economics, 2: 369 (1910).

Rich, Jessie P., *and* Norton, Alice P. A lesson in cookery in the elementary school. Journal of home economics, 2: 601 (1910).

Saxton, Elizabeth W. Blackboard work in the teaching of domestic science. Journal of home economics, 3: 68 (1911).

Willard, Florence. How to teach the preparation of meals. Journal of home economics, 2: 609 (1910).

FOODS AND NUTRITION.

Abderhalden, Emil. Physiological chemistry. Wiley. 722 p. $5.

Bailey, E. H. S. Source, chemistry, and properties of food. Philadelphia, P. Blakiston's son & co. $1.60.

Bardswell, Noel D., *and* Chapman, John E. Diet in tuberculosis, principles and economics. Oxford university press, 1908. 183 p.

Bevier, Isabel, *and* Usher, Susannah Food and nutrition, laboratory manual. Boston, Whitcomb & Barrows. 75 p. $1.

——— *and* Van Meter, Anna R. Selection and preparation of food, laboratory guide. Boston, Whitcomb & Barrows. 86 p. 75 cents.

Brown, Goodwin. Scientific nutrition simplified. New York, Frederick A. Stokes co. 12°. 75 cents.

Browne, Phyllis. Cookery for common ailments. New York, Funk & Wagnalls co. 50 cents.

Bryce, Alex. Dietetics. New York, Dodge publishing co. 25 cents.

Cannon, Walter B. Mechanical factors in digestion. New York, Longmans, Green & co., 1911. $3.

Carpenter, F. O. Foods and their uses. New York, Charles Scribner's sons. 12°. 60 cents.

Carpenter, Mary L. Essentials of dietetics. New York, G. P. Putnam's sons. $1.

Chittenden, Russell H. The nutrition of man. New York, Frederick A. Stokes. illus. 8°. $3.

——— Physiological economy in nutrition. New York, Frederick A Stokes. 8°. $3.

Conley, Emma. Nutrition and diet. New York, American book co. 60 cents.

Crichton-Browne, J. Parsimony in nutrition. New York, Funk & Wagnalls, 1909.

Davis, Nathan S., *jr.* Food in health and disease. Philadelphia, P. Blakiston's son & co. XII, 449 p. $3.50.

Drinkwater, H. Food in health and disease. New York, E. P. Dutton & co. 35 cents.

Finck, Henry T. Food and flavor. New York, Century co. $2.

Forster *and* Weigley. Foods and sanitation (for high schools). Chicago, Row, Peterson & co. 396 p. $1.

Friedenwald *and* Ruhräh. Diet in health and disease. Philadelphia, Saunders. 765 p. $4.

——— Dietetics for nurses. Philadelphia, Saunders. $1.50.

Gautier, Emile Justin. Diet and dietetics. Philadelphia, J. B. Lippincott co. 552 p. $3.50.

Gibbs, Winifred S. Food for the invalid and the convalescent. New York, Macmillan co., 1912. 81 p. 75 cents.

——— Lessons in the proper feeding of the family. New York association for improving the condition of the poor, 105 East 22nd street, N. Y. 25 cents.

Greer, Carlotta C. A text-book of cooking for secondary schools. Boston, Allyn & Bacon. (In press.)

Greer, Edith. Food; cookery; nutrition. New York, Ginn & co. (In press.)

Grules, C. G. Infant feeding. Philadelphia, W. B. Saunders.

Hammersten, Olof. Physiological chemistry. New York, Wiley, 1909. 845 p. $4.

Hull, Winifred S. Nutrition and dietetics. New York, D. Appleton & co. $2.50.

Hutchinson, ———. Food and dietetics. New York, William Wood & co. $3.

Jordan, Whitman H. Principles of human nutrition. New York, Macmillan co. 450 p. $1.75.

Kinne, H., *and* Cooley, A. M. Foods and household management. New York, Macmillan co. $1.10.

Knight, James. Food and its functions (a text-book for students of cookery). New York, Charles Scribner's sons. 12°. $1.

Langworthy, C. F. Composition of food materials. Washington, Government printing office. charts.

Locke, E. A. Food values. New York, D. Appleton & co., 1911. $1.25.

Lusk, Graham. Elements of nutrition. Philadelphia, W. B. Saunders co. 402 p. illus. 8°. $3.

——— Science of nutrition. Philadelphia, W. B. Saunders. 402 p. $2.50.

Mallock, M. M. Economics of modern cookery. New York, Macmillan co. 12°. 90 cents.

Mann, Gustav. Chemistry of the proteids. New York, Macmillan co. 8°. $4.

Mendel, Lafayette B. Childhood and growth. New York, Frederick A. Stokes co. 16°. 60 cents.

Norton, Alice P. Food and dietetics. Chicago, American school of home economics. $1.50.

Olsen, John C. Pure foods, their adulteration, nutritive value, and cost. New York, Ginn & co. 210 p. 12°. 80 cents.

Pattee, Alida F. Practical dietetics. Mt. Vernon, N. Y., A. F. Pattee. $1.50.

Richards, Ellen H. The cost of food. New York, John Wiley & sons. 165 p. $1.

——— First lessons in food and diet. Boston, Whitcomb & Barrows. 52 p. 30 cents.

——— Food materials and their adulterations. Boston, Whitcomb & Barrows. 176 p. $1.

——— *and* Woodman, Alpheus G. Air, water, and food from a sanitary standpoint. New York, John Wiley & sons. 278 p. $2.

Rose, M. S. A laboratory handbook of dietetics. New York, Macmillan co. $1.10.

Rosenau, M. J. The milk question. Boston, Houghton Mifflin co., 1912. 310 p. $2.

Sherman, H. C. Chemistry of food and nutrition. New York, Macmillan co. $1.50.

——— Food products. New York, Macmillan co., 1914. $2.25.

Smith, J. C. What to eat and why. Philadelphia, Saunders, 1911. 311 p. 8°. $2.50.

Snyder, H. Human foods and their nutritive value. New York, Macmillan co. 355 p. $1.50.

Stiles, Percy G. Nutritional physiology. Philadelphia, W. B. Saunders co. 275 p. illus. 12°. $1.25.

Taylor, A. E. Digestion and metabolism. Philadelphia, Lea & Febiger.

Thompson, W. Gilman. Practical dietetics, with special reference to diet in disease. New York, D. Appleton & co. 8°. 75 cents.

Vulte, Herman T., *and* Vanderbilt, Sadie B. Food industries. New York City, Published by the authors, 525 West 120th st., 1914. $1.75.

Wardall, Ruth A., *and* White, Edna N. A study of foods. Boston, Ginn & co. 70 cents.

For eighth grade and high school use.

Watson, ———. Food and feeding. New York, William Wood & co. $5.

Wiley, Harvey W. Beverages and their adulterations. Philadelphia, P. Blakiston's son & co. (In preparation.)

——— Foods and their adulterations. Philadelphia, P. Blakiston's son & co. xii, 641 p. illus. 8°. $4.

Williams, M. E., *and* Fisher, K. R. Theory and practice of cookery. New York, Macmillan co. $1.

Williams, W. M. The chemistry of cookery. New York, D. Appleton & co. 12°. $1.25.

Wood, T. B. The story of a loaf of bread. New York, G. P. Putnam's sons, 1913. vi, 140 p. 40 cents.

FOODS—COOKERY.

Abel, Mary Hinman. Practical sanitary and economic cooking. Rochester, N. Y., American public health association, 1890. 190 p. 50 cents.

Bailey, Harriet P. On the chafing dish. New York, G. W. Dillingham co. 50 cents.

Barroll, Mary Louise. Around-the-world cook book. New York, Century co. $1.50.

Barrows, Anna. Principles of cookery. Chicago, American school of home economics. $1.50.

Berry, *Mrs.* Riley M. Fletcher. Fruit recipes. Garden city, N. Y., Doubleday, Page & co. $1.50.

Boland, Mary A. A handbook of invalid cookery. New York, Century co. $2.

Brugiere, Sara Van Buren. Good living; a practical cookery book for town and country. New York, G. P. Putnam's sons. 8°. $2.

[By an American.] Ice cream and cakes—receipts for household and commercial use. New York, Charles Scribner's sons. 12°. $1.50.

Chambers, Mary D. Principles of food preparation. Boston, The Boston cooking school magazine co. 272 p. $1.

Clarke, H. C., *and* Rulon, P. D. Cook book of left overs. New York, Harper & brothers, 1911. $1.10.

Condit, Elizabeth, *and* Long, Jessie A. How to cook and why. New York, Harper & brothers. $1.

Congreve, A. E. The one-maid book of cookery. New York, E. P. Dutton & co. 217 p. $1.

Conley, Emma. Principles of cooking. New York, American book co. 60 cents.

Cooper, Lenna F. The new cookery. Battle Creek, Mich., Good health pub. co., 1913. ix, 298 p. $1.50.

Cramp, Helen. Winston cook book. Philadelphia, J. C. Winston co. 512 p. illus. $1.20.

Cutler, *Mrs.* B. B. Practical recipes. New York, Duffield & co. $1.25.

Delieé, Felix J. The Franco-American cookery book. New York, G. P. Putnam's sons. illus. 8°. $3.50.

DeLoup, Maximilian. American salad book. Garden City, N. Y., Doubleday, Page & co. $1.

Escoffier, M. Guide to modern cooking. Garden City, N. Y., Doubleday, Page & co. $4.

Farmer, Fannie Merritt. Boston cooking-school cook book. Boston, Little, Brown & co. 648 p. $1.80.

——— Chafing dish possibilities. Boston, Little, Brown & co. 160 p. $1.

——— Food and cookery for the sick and convalescent. Boston, Little, Brown & co. 278 p. $1.60.

——— A new book of cookery. Boston, Little, Brown & co. 440 p. $1.60.

——— Priscilla cook book. Boston, Priscilla pub. co. 25 cents.

——— Year book of dinners for my friend. New York, Dodge publishing co. 60 cents.

Filippini, Alexander. Culinary receipts. New York, Dodge publishing co. 75 cents.

——— International cook book. Garden City, N. Y., Doubleday, Page & co. $1.

Foster, Oliver Hyde. Cookery for little girls. New York, Duffield & co. 75 cents.

Fox, Minnie C. The blue grass cook book. New York, Duffield & co. 12°. $1.35.

Fryer, Jane E. The Mary Frances cook book, or adventures among the kitchen people. Philadelphia, J. C. Winston co. $1.20.

Gallier, Adolphe. The majestic family cook book. New York, G. P. Putnam's sons. 8°. $2.50.

Gibbs, W. S. Food for the invalid. New York, Macmillan co. 75 cents.

Giger, *Mrs.* F. S. The colonial receipt book. Philadelphia, J. C. Winston co. 8°. $1.50.

Glover, Ellye Howell. Dame Curtesy's book of recipes. Chicago, A. C. McClurg & co. 12°. $1.

Green, Olive. Home-maker series: 1. What to have for breakfast; 2. Every-day luncheons; 3. One thousand simple soups; 4. How to cook shellfish; 5. How to cook fish; 6. How to cook meat and poultry; 7. How to cook vegetables; 8. One thousand salads; 9. Every-day desserts; 10. Every-day dinners. New York, G. P. Putnams sons. 16°. Each $1.

Harland, Marian. Breakfast, luncheon, tea. New York, Charles Scribner's sons. 12°. $1.75.

——— The cottage kitchen. New York, Charles Scribner's sons. 12°. $1.

——— *and* Herrick, C. T. The national cook-book. New York, Charles Scribner's sons. 12°. $1.50.

Heritage, Lizzie. Cassell's household cookery. New York, Funk & Wagnalls co. $1.50.

Herrick, Christine Terhune. The chafing-dish supper. New York, Charles Scribner's sons. 12°. 75 cents.

——— The little dinner. New York, Charles Scribner's sons. 12°. $1.

——— Sunday night supper. Boston, Dana, Estes & co. 12°. $1.

——— What to eat: how to serve it. New York, Harper & brothers. $1,

Hill, *Mrs.* A. P. Hill's cook book. New York, G. W. Dillingham co. 50 cents.

——— New southern cook book. New York, G. W. Dillingham co. 12°. $1.

Hill, Janet McKenzie. The book of entrées, including casserole and planked dishes. Boston, Little, Brown & co. 355 p. illus. $1.50.

Hill, Janet McKenzie. Cooking for two. Boston, Little, Brown & co. 378 p. illus. $1.50.

——— Practical cooking and serving. Garden City, N. Y., Doubleday, Page & co. 712 p. $2.

——— Salads, sandwiches, and chafing-dish dainties. Boston, Little, Brown & co. 230 p. illus. $1.50.

Howard, *Mrs.* B. C. Fifty years in a Maryland kitchen. 5th ed. Baltimore, Norman Remington co., 1913. xxi, 419 p. $1.50.

James, Alice L. Catering for two, and Housekeeping for two. New York, G. P. Putnam's sons. Each, 16°. $1.25.

Jenkinson, Eleanor L. The Ocklye cookery book. New York, Funk & Wagnalls co. 8°. 60 cents.

Jones, Mary Chandler. Lessons in elementary cooking. Boston, The Boston cooking school magazine co. 272 p. $1.

Kephart, Horace. Camp cookery. New York, Outing publishing co. 145 p. 70 cents.

Keyzer, *Mrs.* F. French household cooking. New York, Charles Scribner's sons. 8°. 60 cents.

Kirkland, Elizabeth S. Six little cooks, or Aunt Jane's cooking class. Chicago, A. C. McClurg & co. 12°. 75 cents.

Lincoln, Mary J. The Boston cook book. Boston, Little, Brown & co. 600 p. $1.80.

——— Boston school kitchen text-book. Boston, Little, Brown & co. 237 p. School ed. 60 cents.

——— Carving and serving. Boston, Little, Brown & co. 12°. 50 cents.

——— The peerless cook book. Boston, Little, Brown & co. 132 p. 20 cents.

——— What to have for luncheon. New York, Dodge publishing co. $1.25.

——— *and* Barrows, Anna. The home science cook book. Boston, Whitcomb & Barrows. $1.

Lovewell, Caroline B., Whittemore, Frances D., *and* Lyon, Hannah H. The fireless cooker, how to make it, how to use it, and what to cook. Topeka, Kansas, Home pub. co., 1908, 211 p.

Macrae, *Mrs.* Stuart. Ingle nook cookery book. New York, Funk & Wagnalls co. 12°. 50 cents.

Mann, E. E. Invalid recipes. 25 cents.

——— Practical cookery. New York, Longmans, Green & co. 50 cents.

——— Recipe book. 60 cents.

Mitchell, Margaret J. Fireless cook book. Garden City, N. Y., Doubleday, Page & co. $1.25.

Moritz, *Mrs.*, *and* Kahn, *Miss.* The twentieth century cook book. New York, G. W. Dillingham co. 12°. $1.50.

Muckensturm, Louis. Louis' every woman's cook book. New York, Dodge publishing co. $1.50.

——— Louis' salads and chafing dishes. New York, Dodge publishing co. Paper, 50 cents. Cloth, $1.

Neil, Marion H. How to cook in casserole dishes. Philadelphia, David McKay. $1.

Oswald, Ella. German cookery for the American home. Garden City, N. Y., Doubleday, Page & co. $1.50.

Parloa, Maria. New cook book and marketing guide. Boston, Dana, Estes & co. $1.50.

——— Camp cookery. 18°. 50 cents.

——— Kitchen companion. 8°. $2.50.

——— Young housekeeper. 12°. $1.

Payne, A. G. Practical home cookery. New York, Funk & Wagnalls co. 50 cents.

Pease, M. A. The home candy maker. Elgin, Ill. $1.

Robinson *and* Hammell. Lessons in cooking through preparation of meals. Chicago, American school of home economics. 452 p. $1.50.

Ronald, Mary. The century cook book. New York, Century co. 600 p. $2.

——— Luncheons. New York, Century co. illus. $1.40.

Rorer, *Mrs.* Sarah T. Good cooking. Garden City, N. Y., Doubleday, Page & co. 50 cents.

——— Vegetable cookery and meat substitutes. Philadelphia, Arnold, 1909. $1.50.

Sachse, Helena V. How to cook for the sick and convalescent. Philadelphia, J. B. Lippincott co. 12°. $1.25.

Sawtelle, H. L. What to do with a chafing dish. New York, G. P. Putnam's sons. 8°. $1.

Seely, *Mrs.* L. Mrs. Seely's cook-book. New York, Macmillan co. $2.

Smith, Frances Lowe. Recipes and menus for fifty. Boston, Whitcomb & Barrows. $1.50.

Soyer, Nicholas. Paper-bag cookery. New York, Sturgis & Walton. 60 cents.

Sugg, Marie Jenny. The art of cooking by gas. New York, Funk & Wagnalls co. illus. 8°. 75 cents.

Telford, Emma Paddock. Good housekeeper's cook book. New York, Cupples & Leon co. 256 p. 12°. 75 cents.

——— Standard paper-bag cookery. New York, Cupples & Leon co. 50 cents.

Whitney, *Mrs.* A. D. T. Just how: A key to the cook-books. Boston, Houghton Mifflin co. 16°. $1.

Wright, Helen. The New England cook book. New York, Duffield & co. $1.50.

——— The new home cook book. Chicago, A. C. McClurg. $1.

Yates, Lucy H. The gardener and the cook. New York, McBride, Nast & co. $1.25.

FOODS—SERVICE.

Hill, J. M. The up-to-date waitress. Boston, Little, Brown & co. 1906. $1.50.

Marchant, Eleanor. Serving and waiting at the table. New York, Frederick A. Stokes co. 12°. $1.30.

Springstead, A. F. The expert waitress. New York, Harper & brothers. 1911. $1.

BULLETINS PUBLISHED BY UNITED STATES GOVERNMENT ON FOOD AND DIET.[1]

United States. Department of Agriculture. Beans, peas, and other legumes as foods. Rev. ed. Washington, Government printing office, 1906. 38 p. illus. 8°. (Farmers' bulletin, 121.) 5 cents.

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[1] With regard to United States Government publications, the following suggestions may be made:

I. Price lists issued by Superintendent of Documents. Public documents issued by the different government departments can be sometimes supplied gratis by the department of issue; sometimes gratis by members of Congress, for whom a definite supply is set aside; and can always be purchased at a nominal sum, if still in print, from the Superintendent of Documents, Washington, D. C. The Superintendent of Documents will send on request free price lists of public documents, of which the following lists are particularly of interest in connection with the home: 11. Publications on food and diet; 16. Farmers' bulletins, Reports and Yearbooks of the Department of Agriculture; 40. Chemistry bureau. Publications on chemical analyses of food and drug products; 42. Experiment stations office. Publications relating to nutrition, drainage and irrigation investigations, and agriculture extension work; 51. Health and hygiene.

II. Division of publications—Circular 19. U. S. Department of Agriculture, Washington, D. C. Publications of U. S. Department of Agriculture classified for the use of teachers.

III. U. S. Department of Agriculture. List of free and available publications of interest to farm women. October 23, 1913.

IV. Monthly list of publications, U. S. Department of Agriculture. This circular will be sent regularly to all who apply for it.

V. Publications of U. S. Bureau of Education, Washington, D. C.

VI. Publications of U. S. Children's Bureau, Washington, D. C.

United States. Department of Agriculture. Bouillon cubes, their contents, and food value compared with meat extracts and homemade preparations of meat. (Farmers' bulletin, 27.) 5 cents.

——— ——— Bread and bread making. Washington, Government printing office, 1910. 47 p. illus. 8°. (Farmers' bulletin, 389.) 5 cents.

——— ——— Canned fruit, preserves, and jellies; household methods of preparation. Corrected March 25, 1905. Washington, Government printing office, 1905. 31 p. 8°. (Farmers' bulletin, 203.) 5 cents.

——— ——— Canning peaches on the farm. Washington, Government printing office, 1910. 26 p. illus. 8°. (Farmers' bulletin, 426.) 5 cents.

——— ——— Canning tomatoes at home and in club work. . . Washington, Government printing office. 1913. 36 p. 8°. (Farmers' bulletin, 521.) 5 cents.

——— ——— Canning vegetables in the home. Washington, Government printing office, 1909. 16 p. illus. 8°. (Farmers' bulletin, 359.) 5 cents.

——— ——— Care of food in home. Corrected to March 25, 1910. Washington, Government printing office, 1910. 46 p. illus. 8°. (Farmers' bulletin, 375.) 5 cents.

——— ——— Care of milk and its use in home. Washington, Government printing office, 1910. 20 p. 8°. (Farmers' bulletin, 413.) 5 cents.

——— ——— Cereal breakfast foods. Reprinted. Washington, Government printing office, 1909. 36 p. 8°. (Farmers' bulletin, 249.) 5 cents.

——— ——— Charts. Composition of food materials. . . Washington, Government printing office, 1910. 15 charts, each about 23.6 x 17.9 in. Per set of 15 charts, $1.

——— ——— Cheese and its economical uses in the diet. Washington, Government printing office, 1912. 40 p. 8°. (Farmers' bulletin, 487.) 5 cents.

——— ——— Corn meal as a food and ways of using it. (Farmers' bulletin, 565.) 5 cents.

——— ——— Economical use of meat in the home. Washington, Government printing office, 1910. 30 p. 8°. (Farmers' bulletin, 391.) 5 cents.

——— ——— Eggs and their uses as food. Rev. Washington, Government printing office, 1906. 40 p. 8°. (Farmers' bulletin, 128.) 5 cents.

——— ——— Fish as food. Rev., 1907. 32 p. 8°. (Farmers' bulletin, 85.) 5 cents.

——— ——— Food value of corn and corn products. Washington, Government printing office, 1907. 40 p. illus. 8°. (Farmers' bulletin, 298.) 5 cents.

——— ——— Guinea fowl and its use as food. Washington, Government printing office, 1905. 24 p. illus. 8°. (Farmers' bulletin, 234.) 5 cents.

——— ——— Home manufacture and use of unfermented grape juice. Reprint. Washington, Government printing office, 1910. 15 p. illus. 8°. (Farmers' bulletin, 175.) 5 cents.

——— ——— Household tests for the detection of oleomargarine and renovated butter. Washington, Government printing office, 1901. 11 p. 8°. (Farmers' bulletin, 131.) 5 cents.

——— ——— Maple sugar and sirup. Washington, Government printing office, 1906. 36 p. illus. 8°. (Farmers' bulletin, 252.) 5 cents.

——— ——— Mèat on the farm, butchering, curing, and keeping. Rev. Washington, Government printing office, 1906. 37 p. illus. 8°. (Farmers' bulletin, 183.) 5 cents.

——— ——— Meats, composition and cooking. Reprinted. Washington, Government printing office, 1909. 31 p. illus. 8°. (Farmers' bulletin, 34.) 5 cents.

——— ——— Mushrooms as food. Washington, Government printing office, 1898. p. 18–20. 8°. (Farmers' bulletin, 79.) 5 cents.

——— ——— Mutton and its value in diet. Washington, Government printing office, 1913. 32 p. illus. 8°. (Farmers' bulletin, 526.) 5 cents.

United States. Department of Agriculture. Nuts and their uses as food. Washington, Government printing office, 1908. 28 p. illus. 8°. (Farmers' bulletin, 332.) 5 cents.

—— —— Potatoes and other root crops as food. Washington, Government printing office, 1910. 45 p. illus. 8°. (Farmers' bulletin, 295.) 5 cents.

—— —— Poultry as food. Reprint. Washington, Government printing office, 1909. 40 p. 8°. (Farmers' bulletin, 182.) 5 cents.

—— —— Preparation of vegetables for the table. Washington, Government printing office, 1906. 48 p. 8°. (Farmers' bulletin, 256.) 5 cents.

—— —— Preserving eggs in water glass. Washington, Government printing office, 1899. p. 17-18. 8°. (Farmers' bulletin, 103.) 5 cents.

—— —— Shipping eggs by parcel post. Washington, Government printing office. 20 p. 8°. (Farmers' bulletin, 594.)

—— —— Standards of purity for food products. Washington, Government printing office, 1906. 19 p. 8°. (Circular, 19.) 5 cents.

—— —— Sugar and its value as food. Washington, Government printing office, 1913. 32 p. 8°. (Farmers' bulletin, 535.) 5 cents.

—— —— Syllabus of illustrated lecture on care of milk. Washington, Government printing office, 1904. 12 p. 8°. (Farmers' institute lecture, 1.) 5 cents.

—— —— Use of corn, kafir, and cowpeas in the home. Washington, Government printing office, 1913. 12 p. 8°. (Farmers' bulletin, 559.) 5 cents.

—— —— Use of fruit as food. Washington, Government printing office, 1907. 38 p. illus. 8°. (Farmers' bulletin, 293.) 5 cents.

—— —— Use of milk as food. Washington, Government printing office, 1909. 44 p. illus. 8°. (Farmers' bulletin, 363.) 5 cents.

—— —— Bureau of animal industry. Production of clean milk. Prepared in the Dairy division. Washington, Government printing office, 1914. 18 p. 8°. (Farmers' bulletin 602.)

—— —— Bureau of chemistry. Some forms of food adulteration and simple methods for their detection. Washington, Government printing office, 1906. 59 p. 8°. (Bulletin, 100.) 10 cents.

—— —— Bureau of statistics. Cold storage and prices. Washington, Government printing office, 1913, 116 p. illus. 8°. (Bulletin, 101.) 15 cents.

—— —— Office of experiment stations. Chemical composition of American food materials. Rev. ed. Washington, Government printing office, 1906. 87 p. illus. 8°. (Bulletin, 28.) 10 cents.

—— —— —— Course in cereal foods and their preparation, for movable schools of agriculture. Washington, Government printing office, 1908. 78 p. 8°. (Bulletin, 200.) 10 cents.

See also Bulletin, 245. Washington, 1912. 98 p. 8°.

—— —— —— Food customs and diet in American homes. Washington, Government printing office, 1911. 32 p. 8°. (Circular, 110.) 5 cents.

—— —— —— Functions and uses of food. Rev. ed. Washington, Government printing office, 1906. 11 p. 8°. (Circular, 46.) 5 cents.

—— —— —— Digestibility of starch of different sorts as affected by cooking. Washington, Government printing office, 1908. 42 p. illus. 8°. (Bulletin, 202.) 10 cents.

—— —— —— Losses in boiling vegetables; and composition and digestibility of potatoes and eggs. Reprint. Washington, Government printing office, 1910. 31 p. illus. 8°. (Bulletin, 43.) 5 cents.

—— —— —— Report of investigations on digestibility and nutritive value of bread. Reprint. Washington, Government printing office, 1910. 51 p. 8°. (Bulletin, 85.) 5 cents.

United States. Department of Agriculture. Office of experiment stations. Studies of effect of different methods of cooking upon thoroughness and ease of digestion of meat, at University of Illinois. Washington, Government printing office, 1907. 100 p. 8°. (Bulletin, 193.) 15 cents.

——— Department of the Interior. Bureau of education. The daily meals of school children. By Caroline L. Hunt. Washington, Government printing office, 1909. 62 p. 8°. (Bulletin, 1909, no. 3.) 10 cents.

——— ——— Office of Indian affairs. Outline lessons in housekeeping, including cooking, laundering, dairying, and nursing, for use in Indian schools. Washington, Government printing office, 1911. 23 p. illus. 8°. 5 cents.

——— Department of war. Manual for army cooks. 1910. 185 p. illus. small 4°. (Subsistence department.) 50 cents.

HOUSE: CONSTRUCTION AND SANITATION.

Allen, J. K., *ed.* Hot water for domestic use. Chicago, Domestic engineering. 50 cents.

Allingham, H. Cottage homes. New York, Longmans, Green & co.

Bashare, Harvey B. Sanitation of a country house. New York, John Wiley & sons. 102 p. $1.

Bevier, Isabel. The house. Chicago, American school of home economics. $1.50.

Butterfield, W. H., *and* Tuttle, H. W. A book of house plans. New York, McBride, Nast & co. 153 p. $2.

Clark, T. M. Care of a house. New York, Macmillan co. $1.50.

Coleman, Oliver. The book of 100 houses. H. S. Stone, 1901. $1.60.

——— Successful houses. New York, Duffield & co. 8°. $1.35.

DeForest, Robert W., *and* Veillers, Laurence, *editors.* The tenement house problem, including a report of the New York state tenement house commission of 1900-2 vols. New York, Macmillan co., 1903. $6.

Dodd, Helen. The healthful farmhouse. Boston, Whitcomb & Barrows. 70 p. 60 cents.

French, Lillie Hamilton. The house dignified. New York, Putnam, 1908. $5.

Galton, *Sir* D. Healthy dwellings. New York, Oxford university press. 8°. $2.75.

Gerhard, Paul. Disposal of household waste. New York, Van Nostrand co. 50 cents.

Gordon; E. C. The house that Jill built. Adams, 1896.

Hodgson's modern house building. Chicago, F. J. Drake & co. 50 cents.

Hooper, Charles Edward. The country house. Garden City, N. Y., Doubleday, Page & co. $3.

——— Reclaiming the old house. New York, McBride, Nast & co. $2.

Housing and town planning. Philadelphia, American academy of political and social science, 1914. 270 p. $1.50; paper, $1.

Housing problems in America. 2d National conference on housing. Proceedings. Philadelphia, 1912. New York, National housing association. 380 p. 8°.

King, D. W. Homes for home builders. New York, Orange Judd co. $1.

——— Ventilation for dwellings, rural schools, and stables. Madison, Wis., 1908. 125 p. 75 cents.

Lynde, C. J. Home waterworks; a manual of water supply in country homes. New York, 1911. xii, 270 p., 106 figs.

Moore, F. C. How to build a home. Garden City, N. Y., Doubleday, Page & co. $1.

Osborne, C. F. The family house. Philadelphia, Penn. pub. co. $1.

Parsons, S., *jr.* How to plan the home grounds. Garden City, N. Y., Doubleday, Page & co. $1.

Putnam, J. P. Plumbing and household sanitation. Garden City, N. Y. Doubleday, Page & co., 1911. 718 p., 652 figs. $3.75.

Raynes, F. W. Domestic sanitary engineering and plumbing. New York, Longmans, Green & co., 1909. xiii, 474 p. 277 figs.

Richards, Ellen H. The cost of shelter. New York, John Wiley & sons. 136 p. $1.

Sabin, A. H. House painting. New York, John Wiley & sons, 1908. 121 p. $1.

Saybor, Henry H. Architectural styles for country houses. New York, McBride, Nast & co. 4°. $2.50.

——— Bungalows. 4°. $2.

——— Distinctive homes of moderate cost. 4°. $2.

——— The home builder's handbook. Garden City, N. Y., Doubleday, Page & co. illus. 75 cents.

——— Inexpensive homes of individuality. 4°. 75 cents.

Talbot, Marion. House sanitation. Boston, Whitcomb & Barrows. Cloth, 80 cents. Paper, 50 cents.

Thompson, Robert Ellis. The history of the dwelling house and its future. Philadelphia, J. B. Lippincott co. 12°. $1.

Veiller, Laurence. Housing reform. New York, Survey associates. 220 p. 12°. $1.25.

——— A model tenement house law. New York, Survey associates. 130 p. 12°. $1.25.

Waring, George E., *jr.* How to drain a house. (Practical information for householders.) New York, D. Van Nostrand co. illus. 229 p. $1.25.

——— The sanitary drainage of houses and towns. Boston, Houghton Mifflin co. 12°. $2.

White, C. E., *jr.* Successful homes and how to build them. New York, Macmillan co. 520 p. $2.

HOUSE FURNISHINGS.

Brigham, Louise. Box furniture—how to make 100 useful articles for the home. New York, Century co. 350 p. 8°. 140 drawings. $1.60.

Cook, Clarence. The house beautiful. New York, Charles Scribner's sons. $2.50.

Daniels, F. H. Furnishing a modest home. Worcester, Mass., Davis press. 114 p. $1.

de Wolfe, Elsie. The house in good taste. New York, Century co. 300 p. royal 8°. illus. $2.50.

Elder-Duncan, J. H. Country cottages and week-end homes. 4°. $2.50.

——— The house beautiful and useful. New York, John Lane co. 4°. $3.50.

French, Lillie Hamilton. Homes and their decoration. New York, Dodd, Mead, & co., $3.

Hasluck, Paul N. Cassell's house decoration. New York, Funk & Wagnalls co. illus. 8°. $3.

Hunter, George L. Home furnishings. New York, John Lane co. 8°. $2.50.

Jennings, H. A. Our homes and how to beautify them. London, Harrison & sons. 1902.

Johnson, William. Inside one hundred homes. Garden City, N. Y., Doubleday, Page & co. 50 cents.

Kellogg, Alice M. Home furnishings: practical and artistic. New York, Frederick A. Stokes co., 1905. illus. 12°. $1.60.

Langton, *Mrs.* M. B. How to know oriental rugs New York, D. Appleton & co., 1904. $2.

McClure, Abbott, *and* Eberlein, H. D. House furnishing and decoration. New York, McBride, Nast & co. 12°. $1.50.

Moore, *Mrs.* N. H. Old furniture book. New York, Stokes, 1903. $2.15.

Mumford, J. K. Oriental rugs. New York, Scribner, 1902. $7.50.

Northend, Mary H. Colonial homes and their furnishings. Boston, Little, Brown & co. $5.

Priestman, Mabel T. Art and economy in home decoration. New York, John Lane co. $1.50.

——— Artistic homes. Chicago, A. C. McClurg. 8°. $2.

Quinn, Mary J. Planning and furnishing the home. New York, Harper & brothers. $1.

Ripley, Mary Churchill. The oriental rug book. New York, Frederick A. Stokes co. illus. 8°. $3.20.

Sparrow, Walter S. The English house. 8°. $2.50.

——— Hints on house furnishing. New York, John Lane co. 8°. $2.50.

Sturgis, J. R., *and others*. Homes in city and country. New York, Charles Scribner's sons, 1893. $2.

Throop, Lucy A. Furnishing the home in good taste. New York, McBride, Nast & co. iii, 219 p. 4°. $2.

Vollmer, William A. A book of distinctive interiors. New York, McBride, Nast & co. 128 p. $1.

Wheeler, Candace. Homes. A book of bungalow, cottage, and house plans. Cincinnati, Stewart & Kidd co. 96 p. 50 cents.

——— Household art. New York, Harper & brothers. $1.

——— Principles of home decoration. Garden City, N. Y., Doubleday, Page & co. $1.80.

BULLETINS PUBLISHED BY THE U. S. GOVERNMENT ON THE HOUSE AND ITS CONVENIENCES.

United States. Department of agriculture. A cheap and efficient ice box. Washington, Government printing office. 29 p. 8°. (Farmers' bulletin, 353.)

——— ——— The kitchen as a work place. Washington, Government printing office. 8°. (Farmers' bulletin —.)

——— ——— Lighting farmhouses. Washington, Government printing office. 21 p. 8°. (Farmers' bulletin, 517.)

——— ——— Modern conveniences for the farm house. Washington, Government printing office. 8°. (Farmers' bulletin, 270.)

——— ——— A model kitchen. Washington, Government printing office. 30 p. 8°. (Farmers' bulletin, 42.)

——— ——— The power laundry for the farm. Washington, Government printing office. 29 p. 8°. (Farmers' bulletin, 353.)

——— ——— The use of paint on the farm. Washington, Government printing office. 8°. (Farmers' bulletin, 474.)

——— ——— White and color washes. Washington, Government printing office. 23 p. 8°. (Farmers' bulletin, 499.)

CLOTHING.

Textiles.

Baldt, Laura I. Textbook of clothing and textiles for high schools. Philadelphia, J. B. Lippincott co. (In press.)

Barber, Alfred F. Study of textile design. New York, Dutton, 1903. 205 p. $2.50.

Barker, A. F., *and others*. Textiles. New York, D. Van Nostrand co., 1910. 369 p. illus. $2.

Craig, Agnes H. Textile experimentation. Journal of home economics, 3:229 (1911).

Crooks, Nellie. The content of a college course in textiles for the training of teachers, and its application in the lower schools. Journal of home economics, 3:222 (1911).

Dannerth, Frederick. Methods of textile chemistry. New York, John Wiley & son. 146 p. $2.

Dooley, William H. Textiles. New York, D. C. Heath & co. viii, 330 p. illus. $1.25.

Gibbs, Charlotte M. Household textiles. Boston, Whitcomb & Barrows. $1.25.

International library of technology. Scranton, Pa., Int. textbook co. $5 each.

V. 76. Cotton pickers, cards, drawing, rolls, combers, fly frames.
V. 77. Ring frames, cotton mules, twisters, spoolers, warpers, slaskers.
V. 78. Yarns, cloth rooms, mill engineering, reeling, baling, winding.
V. 79. Wool. Scouring, drying, burr picking, mixing, carding, spinning, warping.
V. 80. Cams, fancy and automatic looms, dobbies, box motions, Leno attachments, Jacquards.
V. 81. Weave glossary, fabric analysis, weave varieties, color designs.

Matthews, J. Merritt. Textile fibres. New York, John Wiley & sons. 630 p. 141 figures. $4.

Steiger, Katherine F. Textile study in Rochester elementary schools. Journal of home economics, 1:285 (1909).

Walton, Perry. The story of textiles. Boston, Lawrence & co., 1912. 274 p.

Warp and woof. Book 1. Linen industry (elementary). New York, Educational publishing co. 30 cents.

Watson, Kate H. Textiles and clothing. Chicago, American school of home economics. $1.50.

Woolman, M. S., *and* McGowan, E. B. Textiles: a handbook for the consumer. New York, Macmillan co. $2.

Costume.

Calthorp, Dion C. English costume. London, A. & C. Black, 1908. $1.25.

Earle, Alice Morse. Two centuries of costume in America. New York, Macmillan, co. 1903.

Fales, Jane. The value of a course in historic costume. Journal of home economics, 3:243 (1911).

Domestic Art Teaching.

Baldt, Laura I. Materials available as aids in teaching domestic art. Household arts review, May, 1912.

Cooley, Anna M. Domestic art in women's education. New York, Charles Scribner's sons.

——— Selection of domestic art subject matter for secondary schools. Journal of home economics, 1:52 (1909).

Craig, Agnes H. Report and recommendations on domestic art education. Journal of home economics, 4:270 (1912).

Crawford, Lua R. Art the foundation of domestic art. Journal of home economics, 3:246 (1911).

Ingalls, *Mrs.* Textbook on domestic art. San Francisco, H. S. Crocker co. 250 p. $1.50.

Dressmaking.

Bennett, Annie L. A lesson in dressmaking. Journal of home economics, 2:361 (1910).

Blackmore, B. L. Cutting and making garments. New York, Longmans, Green & co. 90 cents.

Broughton, *Mrs.* J. Practical dressmaking. New York, Macmillan co. 12°. 75 cents.

Browne, M. P. Dress cutting, drafting, and French pattern modeling. London, Constable & co., 1902. 2s.

Carens, Edith M. Dressmaking self-taught. Jacksonville, Fla., Carens college of dressmaking. $1.

Cooke, Jessie C., *and* Kidd, Harriet M. Dressmaking in the schools. New York, Longmans, Green & co. 148 p. $1.35.

Fales, Jane. Textbook on dressmaking. New York, Charles Scribner's sons. (In preparation.)

Ford, Jane. Home dressmaking; or, dressmaking made easy. New York, Cupples & Leon co. 110 p. 12°. 50 cents.

Hicks, Ada. Garment construction in schools. New York, Macmillan co. illus. 8°. $1.10.

Horner, J. Principles of pattern-making. New York, Macmillan co. illus. 12°. 90 cents.

——— Principles of fitting. New York, Macmillan co. illus. 12°. $1.50.

Hughes, T. Dress design. New York, Macmillan co. $3.

Laughlin, Clara E. The complete dressmaker. New York, D. Appleton co. illus. 12°. $1.25.

Reeve, Amy J. The elements of dress pattern-making, Magyar dress-cutting. New York, Longmans, Green & co. 30 p. 43 diagrs. 70 cents.

——— Practical dresscutting up to date. New York, Longmans, Green & co. 30 p., with diagrams. 70 cents.

Sayne, M. B. Simple garments for children. New York, Longmans, Green & co. 48 p. $1.25.

Short, I. Practical home sewing and dressmaking. Glasgow, Blackie & son, 1910. 3s.

Dyeing.

Matthews, J. Merritt. Laboratory manual of dyeing and textile chemistry. New York, John Wiley & sons. 363 p. $3.25.

Owen, F. A., *and* Standage, H.C. Dyeing and cleaning of textile fabrics. New York, John Wiley & sons. 253 p. $2.

Pellew, Charles E. Dyes and dyeing. New York, McBride, Nast & co., 1913. viii, 264 p. $2.

Sewing.

Banner, B. Household sewing. New York, Longmans, Green & co. 157 p. 90 cents.

Blair, Margaret. Model sewing and garment drafting. St. Paul, Webb, 1900. 202 p.

Foster, Oliver H. Sewing for little girls. New York, Duffield & co. 75 cents.

Hapgood, Olive C. School needlework. New York, Ginn & co. 162 p. 50 cents. Teachers' ed., 244 p. 75 cents.

Hasluck, Paul N. Sewing machines: their construction, adjustment and repair. New York, Funk & Wagnalls co. 50 cents.

James, T. M. Longmans' complete course of needlework, knitting, and cutting-out. New York, Longmans, Green & co. 452 p. illus. $2.

Johnson, Catherine F. Lessons in needlework. New York, D. C. Heath & co. xii, 120 p. illus. 90 cents.

Johnson, Florence K. How shall the little ones sew? New York, Peoples' university extension society. 32 p. 10 cents.

Kirkwood, L. J. Sewing primer. New York, American book co. 30 cents.

Krolick. Hand sewing lessons (elementary). New York, Educational publishing co. 15 cents.

McKenna, *ed.* The woman's library of needlework. New York, E. P. Dutton co. $1.50.

Patton, Frances. Home and school sewing. Chicago, A. Flanagan co. illus. 234 p. 60 cents.

Swanson, Margaret, *and* Macbeth, Ann. Educational needlecraft. New York. Longmans, Green & co. 136 p. $1.35.

Wakeman, Antoinette V. H., *and* Heller, Louise M. Scientific sewing and garment cutting. Boston, Silver, Burdette & co. 155 p.

MILLINERY AND EMBROIDERY.

Day, S. F. Art in needlework. London, Batsford, 1901. 262 p.

Embroidery up-to-date. New York, Butterick publishing co.

Goldenberg. Lace, its origin and history. 1904. $1.50.

Hill, C. Millinery, theoretical and practical. Philadelphia, J. B. Lippincott co. 12°. 75 cents.

Ortner, J. Practical millinery. Whittier & co. 1897.

Practical millinery lessons. New York, Millinery trade pub. co., 1913. $1.

Reeve, Amy J. Practical home millinery. New York, Longmans, Green & co., 1903. 91 p. $1.

Sharp, Mary. Point and pillow lace. New York, Dutton, 1899. 202 p. $2.

Tobey, Evelyn S. Hand-made flowers and how to make them. New York, Published by the author, 525 west 120th st. 50 cents.

Townsend, W. G. Embroidery. London, Truslove, 1899. 115 p.

Yusuf, A. B. The art of millinery. New York, Millinery trade pub. co., 1909. $2.

MANAGEMENT OF HOUSEHOLD—ITS TEACHING.

American home economic association. Institution administration. Report of institution section. *In* Journal of home economics, November 1910, December 1911, October 1912, 1913, 1914.

Bell, Martha T. The use of a college residence in teaching household management. Journal of home economics, 3: 149 (1911).

Brooks, Ethel F. A lesson in house construction for the elementary grades. Journal of home economics, 2: 673 (1910).

Elliott, S. Maria. The teaching of methods of housewifery in secondary schools. Journal of home economics, 2: 379 (1910).

Kittredge, Mabel Hyde. Housekeeping notes. Boston, Whitcomb & Barrows. 97 p. Cloth, 80 cents. Paper, 60 cents.

——— Practical homemaking. New York, Century co. 153 p. 60 cents.

Langworthy, C. F. State and municipal documents as sources of information for institution managers and other students of home economics. Journal of home economics, 4: 59 (1912).

Stewart, Gwendolyn. A suggested course of study in household administration. Journal of home economics, 2: 226–29, April 1910.

MANAGEMENT OF HOUSEHOLD—GENERAL WORKS.

(See also General Works, p. 12.)

Barnett, *Mrs.* S. A. The making of the home. New York, Funk & Wagnalls co. 50 cents.

Beecher, Eunice. Law of the household. Boston, W. B. Clarke co. $1.50.

Benton, Caroline French. Living on a little. Boston, Dana, Estes & co. 12°. $1.25.

Browne, Phyllis. Practical housekeeping. New York, Funk & Wagnalls co. 50 cents.

Butterworth, A. Manual of household work and management. New York, Longmans, Green & co. 90 cents.

Child, Georgie B. The efficient kitchen. New York, McBride, Nast & co., 1914. $1.25.

Foster, Oliver Hyde. Housekeeping for little girls. New York, Duffield & co. 75 cents.

Frederick, Christine. New housekeeping. Garden City, N. Y., Doubleday, Page & co. $1.

Hall, Florence H. A handbook of hospitality for town and country. Boston, Dana, Estes & co. 12°. $1.50.

Harper's household handbook. New York, Harper & brothers. $1.

Herrick, Christine Terhune. First aid to the young housekeeper. New York, Charles Scribner's sons. 12°. $1.

——— Housekeeping made easy. New York, Harper & brothers. $1.

Holt, Emily. Complete housekeeping. Garden City, N. Y., Doubleday, Page & co. $1.

Kirkland, Elizabeth S. Dora's housekeeping. Chicago, A. C. McClurg. 12°. 75 cents.

Larned, Linda Hull. The new hostess of to-day. New York, Charles Scribner's sons. 12°. $1.50.

Laughlin, Clara E. The complete home. New York, D. Appleton & co. illus. 12°. $1.25.

——— The complete hostess. New York, D. Appleton & co. illus. 12°. $1.25.

Parloa, Maria. Home economics. New York, Century co. ill.

Terrill, Bertha M. Household management. Chicago, American school of home economics. $1.50.

Van de Water, Virginia Terhune. From kitchen to garret. New York, 1910. Plates.

White, Marian. The fuels of the household. Boston, Whitcomb & Barrows. 97 p. 75 cents.

Wilbur, Mary A. Every-day business for women. Boston, Houghton Mifflin co. 12°. $1.25.

——— Housekeeping in the blue grass. Cincinnati, Stewart & Kidd co. 12°. $1.

Wright, Samuel S. The kitchen fire and how to run it. Scranton, Pa., 1912. 97 p. 75 cents.

Housewifery.

Brannt, William T. Dry cleaning, scouring, dyeing of garments and rugs. Philadelphia, Henry Carey Baird, 1909.

Hasluck, Paul N. Domestic jobbing. New York, Funk & Wagnalls co. 50 cents.

Osman, E. G. Cleaning and renovating at home. Chicago, A. C. McClurg & co.

Picton-Godsden, C. F. Practical housewifery. London, Swan, Sonnenschein & co.

HYGIENE AND HOME NURSING.

Aitkens, C. A. The home nurse's handbook of practical nursing. Philadelphia, W. B. Saunders. 1912. $1.50.

Delano, Jane A., *and* McIsaac, Isabel. Elementary hygiene and the home care of the sick. Philadelphia, P. Blakiston's son & co. xv, 256 p. illus. $1.

Ditman, Norman E. Home hygiene and prevention of disease. New York, Duffield & co. $1.50.

Elliott, S. Maria. Household hygiene. Chicago, American school of home economics. $1.50.

Griffith, J. O. Helps and hints in nursing. Philadelphia, J. C. Winston co. 480 p. $1.50.

Harrison, E. Home nursing. New York, Macmillan co. $1.

Hope, George H. Till the doctor comes and how to help him. New York, G. P. Putnam's sons. 16°. $1.

Howard, Leland O. The house fly. New York, Frederick A. Stokes. 12°. $1.60.

Le Bosquet, M. Personal hygiene. Chicago, American school of home economics. $1.50.

Lippert, Frieda, *and* Holmes, Arthur. When to send for the doctor and what to do before the doctor comes. Philadelphia, J. B. Lippincott co. 12°. $1.25.

Lynch, Charles. American red cross textbook on first aid and relief columns. Philadelphia, P. Blakiston's son & co. 244 p. illus. $1. Woman's edition. 148 p. 30 cents.

Morrow, Albert S. Immediate care of the injured. Philadelphia, W. B. Saunders co. illus. 360 p. 8°. $2.50.

Pope, Amy E. Home care of the sick. Chicago, American school of home economics. $1.50.

Pyle, Walter M., *ed.* A manual of personal hygiene, with a chapter on domestic hygiene. Philadelphia, W. B. Saunders co.

Richards, Ellen H. The cost of cleanness. New York, John Wiley & sons. 109 p. $1.

——— Sanitation in daily life. Boston, Whitcomb & Barrows. 82 p. 60 cents.

Ross, Edward H. The reduction of domestic flies. Philadelphia, J. B. Lippincott co. 8°. $1.50.

Stacpoole, Florence. Our sick, and how to take care of them. New York, Funk & Wagnalls co. 50 cents.

BULLETINS PUBLISHED BY THE UNITED STATES GOVERNMENT ON HYGIENE.

United States. Department of agriculture. Bacteria in milk. Washington, Government printing office, 1912. 23 p. illus. 8°. (Farmers' bulletin 490.) 5 cents.

——— ——— Harmfulness of headache mixtures (containing acetanilid, antipyrin, and phenacetin). Washington, Government printing office, 1909. 16 p. 8°. (Farmers' bulletin 377.) 5 cents.

——— ——— How to prevent typhoid fever. Washington, Government printing office, 1911. 8 p. 8°. (Farmers' bulletin 478.) 5 cents.

——— ——— Remedies and preventatives against mosquitos. Washington, Government printing office, 1911. 15 p. 8°. (Farmers' bulletin 444.) 5 cents.

——— ——— Sanitary privy. Washington, Government printing office, 1911. 32 pp. illus. (Farmers' bulletin 463.) 5 cents.

——— ——— Some common disinfectants. Washington, Government printing office, 1908. 12 p. (Farmers' bulletin 345.) 5 cents.

——— ——— Some facts about malaria. Washington, Government printing office, 1911. 13 p. illus. (Farmers' bulletin 450.) 5 cents.

——— ——— Water supply, plumbing, and sewage disposal for country homes. (Farmers' bulletin 57.)

——— ——— Bureau of animal industry. Directions for home pasteurization of milk. Rev. ed. Washington, Government printing office, 1912. 3 p. illus. 8°. (Circular 197.) 5 cents.

——— ——— Bureau of entomology. Bed-bugs. Washington, Government printing office, 1907. 8 p. illus. 8°. (Circular 47.) 5 cents.

——— Department of labor. Children's bureau. Baby-saving campaigns; preliminary report on what American cities are doing to prevent infant mortality. Washington, Government printing office, 1913. 93 p. illus. 8°. 15 cents.

——— ——— ——— Prenatal care. Washington, Government printing office, 1913. 41 p. 8°. 5 cènts.

——— Department of the interior. Bureau of education. Medical handbook. Washington, Government printing office, 1913. 179 p. 12°. (Alaska school service.) 50 cents.

——— Department of the treasury. Public health service. Antimalarial measures for farm houses and plantations. Washington, Government printing office, 1912. 8 p. 8°. 5 cents.

Reprinted from Public health reports, vol. 27, no. 49.

——— ——— ——— Disinfectants, their use and application in prevention of communicable diseases. Washington, Government printing office, 1911. 46 p. 8°. (Bulletin 42.) 10 cents.

United States. Department of the treasury. Public health service. Hospital relief for rural districts; possibilities offered by hospital trains in furnishing much-needed medical and surgical facilities to those living at a distance from cities and towns. Washington, Government printing office, 1913. 7 p. 8°. 5 cents.

Reprinted from Public health reports, vol. 28, no. 5.

——— ——— ——— Hookworm disease, or ground-itch anemia; its nature, treatment, and prevention. 3d ed. Washington, Government printing office, 1910. 40 p. illus. 8°. (Bulletin 32.)

——— ——— ——— Sanitary privy; its purpose and construction. (Bulletin 37.) 5 cents.

——— ——— ——— Shower bath for country houses, serviceable and inexpensive shower bath readily improvised in town or country. Washington, Government printing office, 1913. 4 p. illus. (Supplement 7 to Public health reports.) 5 cents.

See also Public health reports, vol. 27, no. 46. 5 cents.

——— ——— ——— Tuberculosis, its nature and prevention. (Bulletin, 36.) 5 cents.

——— Government hospital for the insane. Lessons in cooking, theoretical and practical, for sick and convalescent, for use of cooking class of nurses' training school. Washington, Government printing office, 1913. 32 p. 8°. 5 cents.

THE CHILD.

Allen, Mary Wood. Making the best of our children. Chicago, A. C. McClurg & co. 16°. $1.

Barnesby, Norman. The mother and the child. New York, Mitchell Kennerley. 189 p. 12°. $1.25.

Birney, *Mrs.* Theodore W. Childhood. New York, Frederick A. Stokes co. 12°. $1.

Blackwell, Elizabeth. Counsel to parents. New York, Macmillan co. 12°. 35 cents.

Brown, Daniel Rollins. The baby, a book for mothers and nurses. Boston, Whitcomb & Barrows. 200 p. $1.

Chapin, Henry D. Theory and practice of infant feeding. New York, William Wood & co. $2.25.

Cotton, A. C. Care of children. Chicago, American school of home economics. $1.50.

Davis, Edward P. Mother and child. Philadelphia, J. B. Lippincott co. 12°. $1.50.

Dawson, George E. The child and his religion. Chicago, University of Chicago press. 130 p. 12°. 75 cents.

Dennett, R. The healthy baby. New York, Macmillan co. $1.

Eghian, Setrak G. The mother's nursery guide. New York, G. P. Putnam's sons. 8°. $1.

Fischer, Louis. The health-care of the baby. New York, Funk & Wagnalls co. 12°. 75 cents.

Griffith, J. P. Crozer. Care of the baby; a manual for mothers and nurses. Philadelphia, Saunders. 404 p. illus. $1.50.

Gruenberg, Sidonie Matzner. Your child to-day and to-morrow. Philadelphia, J. B. Lippincott co. 12°. $1.25.

Hall, Florence H. Book of etiquette: boys and girls and manners. Boston, Dana, Estes & co. $1.35.

Harrison, Elizabeth. A study of child nature. Chicago, Kindergarten college, 1900. 207 p. $1.

Hillyer, V. M. Kindergarten at home. Garden City, N. Y., Doubleday, Page & co. illus. $1.25.

Hitching, Wilena, *and* Lutes, Della Thompson. Baby clothing, with patterns. New York, Frederick A. Stokes co. illus. 16°. $1.

Hogan, Louise E. How to feed children. Philadelphia, J. B. Lippincott co. 12°. $1.

Holmes, Arthur. The conservation of the child. Philadelphia, J. B. Lippincott co. 12°. $1.25.

——— Principles of character making. Philadelphia, J. B. Lippincott co. 12°. $1.25.

Holt, L. Emmett. The care and feeding of children. New York, D. Appleton & co. 16°. 75 cents.

——— *and* Shaw, H. L. K. Save the babies. Chicago, American medical association. 19 p.

Kerley, Charles Gilmore. Short talks with young mothers on the management of infants and young children. New York, G. P. Putnam's sons. 345 p. illus. 8°. $1.

Kerr, Le Grand. The care and training of children. New York, Funk & Wagnalls co. 12°. 75 cents.

King, F. Truby. Feeding and care of baby. New York, Macmillan co. illus. 8°. Paper, 35 cents.

Lynch, Ella Frances. Educating the child at home. New York, Harper & brothers. $1.

Lyttelton, Edward. The corner-stone of education. An essay on the home training of children. New York, G. P. Putnam's sons. $1.25.

McCracken, Elizabeth. The American child. New York, Houghton Mifflin co. 16°. $1.25.

McKeever, W. A. Training of the boy. New York, Macmillan co. $1.50.

——— Training the girl. New York, Macmillan co. illus. 12°. $1.50.

Mangold, George B. Child problems. New York, Macmillan co., 1910. 381 p. $1.25.

Mills, Jane D. The mother artist, on the problems of child training. Boston, The Palmer co. $1.

Montessori, Maria. The Montessori method of scientific pedagogy. New York, Frederick A. Stokes co. illus. 12°. $1.75.

Mumford, Edith E. R. The dawn of character. A study of child life. London, Longmans, Green and co., 1910. $1.20.

Noyes, Anna G. How I kept my baby well. Baltimore, Warwick & York. 193 p. 12°. $1.25.

Richardson, Anna Steese. Better babies and their care. New York, Frederick A. Stokes Co. 16°. 75 cents.

Rose, Mary D. S. Feeding of young children. New York, Teachers college, 1911. 10 p. (Technical education. Bulletin no. 3.) 10 cents.

——— Food for school boys and girls. New York, Teachers college, 1914. 15 p. (Technical education. Bulletin no. 23.) 10 cents.

Smith, Nora E. The home-made kindergarten. Boston, Houghton Mifflin co. 16°. 75 cents.

Spiller, G. The training of the child: a parent's manual. New York, Dodge publishing co. 25 cents.

Starr, Louis. The hygiene of the nursery. Philadelphia, P. Blakiston's son & co. xi, 331 p. illus. 12°. $3.

Terman, Lewis M. The hygiene of the child. Boston, Houghton Mifflin co. 12°. $1.75.

Wallin, J. E. Mental health of the school child. New Haven, Yale university press, 1914. 463 p. $2.

Washburne, Marion Foster. Study of child life. Chicago, American school of home economics. $1.50.

Westlake, Albert. Baby's teeth to the twelfth year. New York, Mitchell Kennerley. 18°. 35 p. 50 cents.

Wheeler, Marianna. The baby: his care and training. New York, Harper & brothers. $1.

——— The young mother's handbook. New York, Harper & brothers. $1.

Wiggin, Kate Douglas. The baby; a mother's book by a mother. New York, Dodge publishing co. 25 cents.

——— *and* Smith, Nora Archibald. 1. Children's rights. 2. The story hour. Boston, Houghton Mifflin co. 16°. $1 each.

Winterburn, Florence Hull. The mother in education. McBride, Nast & co. $1.50.

Winters, Joseph E. Feeding of infants. New York, E. P. Dutton & co. 50 cents.

RECREATION IN THE HOME.

Bullivant, Cecil H. Home fun. New York, Dodge publishing co. $1.50.

——— Home plays. New York, Dodge publishing co. $1.50.

Chenery, W. E. Home entertaining. Boston, Lothrop, Lee & Shephard co. 75 cents.

Crozier, Gladys B. Children's parties. New York, Dutton. 1914. illus. 119 p. (Russell Sage foundation.) 40 cents.

Hoffman, May C. Games for everybody. New York, Dodge publishing co. 50 cents.

Moses, Montrose G. Children's books and reading. New York, Mitchell Kennerley, 272 p. 12°. $1.50.

——— The children's encyclopaedia. New York, Grolier society.

——— Home games and parties. Garden City, N. Y., Doubleday, Page & co. 50 cents.

Nicoll, W. Robertson. Book of family worship. New York, G. H. Doran co. 8°. $1.50.

Sangster, Margaret E. Good manners for all occasions. New York, Cupples & Leon co. 12°. $1.25.

LAUNDRY WORK—ITS TEACHING AND TEXTBOOKS.

Balderston, L. Ray. Courses of instruction in laundry management. Journal of home economics, 2:538 (1910).

——— Laundering. Philadelphia, Published by the author, 1224 Cherry street. 214 p. $1.25.

——— Opportunities for teachers and specialists in laundry work. Journal of home economics, 4:166 (1912).

Calder, Fanny F., *and* Mann, E. E. Elementary laundry work. New York, Longmans, Green & co. 82 p. 30 cents.

Laundry management. Administration section. Journal of home economics, 5:108 (1913); 6:321 (1914).

Shepperd, J. L. Laundry work. St. Paul, Webb pub. co. 103 p. 50 cents.

HOUSEHOLD ACCOUNTS.

Andrews, Benjamin R. A survey of your household finances. New York, Teachers college. 16 p. 10 cents.

Brookman, Thirmuthis A. Family expense account. New York, D. C. Heath & co. iv, 84 p. 60 cents.

Fleming, Edith C. Students expenses. Ithaca, N. Y., Cornell university. (Department of home economics. Record book.) 50 cents.

Haskins, C. W. How to keep household accounts. New York, Harper & brothers.

Ibotson, ——. Personal and domestic accounts. London, Gee & co.

Kirk, *Mrs.* Alice Gitchell. Handy expense cards for housekeepers. Cleveland, Ohio, May co. Set of cards. 50 cents.

Ware, Emma F. Family genealogical record. Boston, W. B. Clarke co. Blanks. folio. $1.25.

Winslow, Emma A. Your household budget in graphic form. A new method of analysing and controlling household expenditures. New York, Published by the author, 525 west 120th street. 15 cents.

6. BULLETINS PUBLISHED BY COLLEGES AND SCHOOLS.

University of California, Berkeley, Cal.

The household as an economic agent: record sheets for the cost of living. Syllabus series, no. 10. Revised 1912. 35 cents.

Vail, Mary B. Home economics recipes. Syllabus series, no. 35. 1912. 25 cents.

Colorado Agricultural College, Fort Collins, Colo.

Cone, U. M. Domestic water supply.

Household arts and agriculture for the rural school.

Hampton Institute, Hampton, Va.

Agnew, Ella G. Correlation of industrial and academic subjects in rural schools.

Barrett, Jane P., *and others*. Community clubs for women and girls.

Cook, Amelia A. Housekeeping and cooking lessons for rural communities.

Dickerman, G. S. Common sense in negro schools.

Domestic arts at Hampton institute. IV–3.

Housekeeping rules. II–9.

Jinks, J. H. Manual training in rural schools.

Moulton, Mildred E. Canning fruits and vegetables.

Stiles, C. W. Hookworm disease and the negroes.

Taylor, Ellen. Sewing lessons for rural schools.

—— *and* Walter, Sarah J. Housekeeping and sanitation for rural schools.

Underwood, W. L. The house fly as a carrier of disease.

Vail, Mary B. Approved methods for home laundering.

University of Idaho, Moscow, Idaho.

(Department of Home Economics.)

I. In cooperation with the State department of public instruction, publishes the following bulletins for the boys' and girls' clubs of the State: Bread contest clubs; Sewing; Rural school lunch.

II. Lessons for movable schools. (Extension bulletin, no. 4.)

University of Illinois, Urbana, Ill.

(Department of Household Science.)

Bevier, Isabel. The planning of meals.

—— Some points in the making and judging of bread.

Gibbs, Charlotte. Some points in choosing textiles.

Goldthwaite, Nellie E. Cooking of carp. Chocolate and cocoa.

—— Principles of jelly making.

Syllabus of domestic science and domestic art for the high schools of Illinois.

Usher, Susannah. Some points to be considered in the planning of a national diet.

IOWA STATE COLLEGE OF AGRICULTURE AND THE MECHANICAL ARTS, AMES, IOWA.

I. Short course class notes: No. 1. Demonstration—bread lesson. No. 2. Demonstration—meats. No. 3. Demonstration—vegetables. No. 4. Demonstration—eggs and milk. No. 5. Demonstration—cereals and other starchy foods. No. 6. Home nursing. No. 7. Personal hygiene. No. 8. Demonstration—practical dietetics. No. 8. Home management. No. 9. Vegetables. No. 10. Caloric value of foods—nutrition. No. 11. Company supper. No. 12. Demonstration—soups and serving. No. 13. Demonstration—cake. No. 14. Salads. No. 15. Public and home sanitation. No. 16. Demonstration—potatoes. No. 17. Demonstration—desserts. No. 19. Entrées. No. 20. Every day meat dishes. No. 21. Beverages. No. 22. The care of children. No. 23. Fruit.

II. Home economics circulars: No. 1. Planning and serving meals. No. 2. Textiles. No. 3. List of valuable books and bulletins for home economics. No. 4. Suggestions for household exhibits.

UNIVERSITY OF MAINE, ORONO, MAINE.

(Department of Domestic Science.)

Bacon, Dorothea. Care of food in the home.

Classified bibliography of home economics.

Home-making correspondence course: Fifteen bulletins, in preparation. 1. Food and the human body; 2. Vegetables; 3. Canning and jelly making; 4. Sugar; 5. Cereals; 6. Bread; 7. Meat; 8. Gelatine and soups; 9. Eggs; 10. Dairy products; 11. Salads; 12. Desserts; 13. Serving; 14. Marketing and menus; 15. Care of food in the home.

Randall, Lillian. Home furnishing and decoration.

MASSACHUSETTS AGRICULTURAL COLLEGE, AMHERST, MASS.

Massachusetts boys' and girls' home economics clubs. Primer of instruction. 1914. p. 40.

Some good books for farm women. Library leaflet, no. 5.

UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINN.

(Department of Agriculture St. Paul, Minn.)

Domestic science in rural schools. (Extension bulletin, no. 19.)

UNIVERSITY OF MISSOURI, COLUMBIA, MO.

(Department of Home Economics.)

I. Bulletins published in conjunction with State board of agriculture: The model kitchen; Candy making; Exhibit work in home economics—classifications and score cards; Annual reports of Missouri home makers' conference.

II. Bulletin in conjunction with extension department of university: Projected for 1914.

(Engineering Experiment Station.)

I. 1. Acetylene for lighting country homes. By J. D. Bowles.

I. 2. Water supply for country homes. By Karl A. McVey.

I. 3. Sanitation and sewage disposal for country homes. By William C. Davidson.

III. 1. The use of metal conductors to protect buildings from lightning. By E. W. Kellogg.

IV. 1. Economics of rural distribution of electric power. By L. E. Hildebrand.

IV. 3. Artesian water in Missouri. By A. W. McCoy.

NEW YORK STATE COLLEGE OF AGRICULTURE, CORNELL UNIVERSITY, ITHACA, N. Y.

(Department of Home Economics.)

I. Cornell reading course for farmers' wives: A series of 28 bulletins were issued, beginning with "Saving steps" in 1900, and including among others the following titles: Home decorating, Housekeeping, Reading, Insect pests, Home sanitation, Canning and preserving, Household equipment, and Human nutrition. This series is now out of print, and several have been rewritten for the new series below, which began in October, 1911.

II. The Cornell reading course for the farm home: (1) The care and feeding of children, Part I. By Flora Rose. (3) The care and feeding of children, Part II. By Flora Rose. (5) Household decoration. By Helen Binkerd Young. (7) Household furnishing. By Helen Binkerd Young. (9) Reading in the farm home. By Martha Van Rensselaer *and* Caroline Webster. (11) The laundry. By Flora Rose. (13) Cornell study clubs. By Martha Van Rensselaer *and others*. (15) Principles of jelly-making. By N. E. Goldthwaite. (17) The preservation of food in the home, Part I. By Flora Rose. (19) The preservation of food in the home, Part II. By Flora Rose. (21) The preservation of food in the home, Part III. By Flora Rose *and others*. (23) Methods of cleaning. By Mary Urie Watson. (25) Saving strength. By Emily M. Bishop *and* Martha Van Rensselaer. (27) Choice and care of utensils. By Ida S. Harrington. (29) Cost of food. By Flora Rose. (31) Household bacteriology. By Martha Van Rensselaer. (33) Vegetable-gardening. By Albert E. Wilkinson. (35) The flower garden. By Albert E. Wilkinson. (37) Home economics at the New York State College of Agriculture. By Martha Van Rensselaer. (39) The farmhouse. By Helen Binkerd Young. (41) Rules for planning the family dietary. By Flora Rose. (43) The box luncheon. By Clara W. Browning. (45) Choosing of textiles. By Bertha E. Titsworth. (47) A canning business for the farm home. By Clarabel Nye *and* Bessie E. Austin. (49) Household insects and how to control them. By Glenn W. Herrick. (51) A story of certain table furnishings. By Clara W. Browning *and* Edith J. Munsell. (53) The Christmas festival. By Bertha Betts. (55) Rice and rice cookery. By Miriam Birdseye. No. 57. A syllabus of lessons for extension schools in home economics. By Miriam Birdseye. No. 59. Sewage disposal for country homes. By Howard W. Riley. No. 61. Attic dust and treasures. By Blanche E. Hazard. No. 63. The young woman on the farm. By Martha Foote Crow. No. 65. Farmhouse amusements for boys and girls. By Blanche E. Hazard. No. 67. Canning clubs in New York state: organizing. No. 69. Canning clubs in New York state: methods in canning. No. 71. Canning clubs in New York state: equipment. No. 73. Cake-making. Part I. No. 75. Cake-making, Part II.

NORTH DAKOTA AGRICULTURAL COLLEGE, AGRICULTURAL COLLEGE, N. DAK.

I. Bulletins of College extension department, VI–8. Home economics—bread making, salad making, candy making.

II. Bulletins of food, Department of agricultural experiment station.

OHIO STATE UNIVERSITY, COLUMBUS, OHIO.

I. Home makers' reading course, 1910–11: The canning of fruits and vegetables; Fruit and vegetable canning; Jellies, jams, preserves, and pickles; Bread and bread making; Sanitation.

II. Home makers' reading course, 1912: Meats; Cereals; Kitchens.

OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE, STILLWATER, OKLA.

(Extension Department.)

Boys and girls' agricultural clubs. Bulletins. By Henrietta Kolshorn. Cooking—Lessons IV, V, VI; Sewing course—Lessons IV, V, VI; Sewing, for girls in sewing contest; Cooking; Home canning, for girls in canning contest; Plan for 1914 scholarship contests.

OREGON AGRICULTURAL COLLEGE, CORVALLIS, OREG.

(School of Domestic Science and Art.)

Camp cookery. By Miss Smith and Miss Milam. Principles of bread making. By Dean Calvin. Principles of jelly making. By Miss Milam. Principles of cake making. By Miss Milam. School luncheons. By Dean Calvin. Department recipes. By Dean Calvin.

WASHINGTON AGRICULTURAL EXPERIMENT STATION, PULLMAN, WASH.

Butter making on the farm. Bulletin, 41.
Cleanliness and cold as applied to the dairy. Bulletin, 55.
How to make bread from soft-wheat flours. Bulletin, 47.
Preserving eggs. Bulletin, 54.
Sewage disposal for country homes. Extension bulletin, no. 5.

PURDUE UNIVERSITY, LA FAYETTE, IND.

(Agricultural Extension Department.)

I. Bulletin of university: Helps for teachers in agriculture and domestic science—Nos. 1, 3, 5, 7.

II. Bulletins of Department of agricultural extension: Agricultural and industrial work in the schools of Hamilton County; Domestic science in the high school; Domestic science in rural communities; Some points in bread making; Helps for club members—girls' sewing clubs.

TEACHERS COLLEGE, COLUMBIA UNIVERSITY, NEW YORK CITY.

(Technical Education Bulletins.)

No. 1. Economic function of women. By Edward T. Devine. 10 cents.
No. 2. Annotated list of books relating to household arts. 42 p. 15 cents.
No. 3. The feeding of young children. By Mary Swartz Rose. 10 cents.
No. 4. Hints on clothing. By Mary Schenck Woolman. 8 p. 10 cents.
No. 5. Quantitative aspects of nutrition. By Henry C. Sherman. 10 cents.
No. 7. The determination of cotton and linen by chemical and microscopic methods. By Professor Herzog, of Prussian Textile School, at Sorau. Translated by Ellen Beers. 25 cents.
No. 8. A syllabus of household management. By Mary Louise Furst. 10 cents.
No. 9. The girl of to-morrow—what the school will do for her. By Benjamin R. Andrews. 10 cents.
No. 13. A dietary study in a children's hospital. By Mary Swartz Rose *and* Harriet C. Jacobson. 10 cents.
No. 18. Canned foods: Fruits and vegetables. By Florence R. Corbett. 10 cents.
No. 19. Physical and chemical tests for the housewife. By Sadie B. Vanderbilt. 10 cents.
No. 20. Address list for illustrative materials and laboratory supplies for instruction in household arts. 10 cents.
No. 22. Some attempts to standardize oven temperatures for cookery processes. By May B. Van Arsdale. 10 cents.

No. 23. Food for school boys and girls. By Mary S. Rose. 10 cents.
A survey of household finances. By B. R. Andrews. 16 p. 10 cents.
A syllabus of physiological chemistry. *In preparation.*
Chart showing correlation of the textile phases of industrial work in the elementary school. Speyer school. 20 cents.
Comparative study of homemade and bakers' bread. *In preparation.*
Floor plans of household arts building. 4 p. free.
Technology of cookery. By May B. Van Arsdale, ass't professor, School of practical arts, Teachers college. *In preparation.*

UNIVERSITY OF TEXAS, AUSTIN, TEX.

(School of Domestic Economy.)

Cooking of tough meats.
Food for children.
Rich, Jessie P. Cleanliness and health.
——— The problem of the school luncheon. I and II.
——— The uses of foods and the proper balancing of the diet.
Richardson, Anne. The principles of menu making. I and II.
Rural series: No. 1. The potato; No. 2. Seasonable fruits; No. 3. Meats.

TUSKEGEE NORMAL AND INDUSTRIAL INSTITUTE, TUSKEGEE, ALA.

Carver, George W. Canning and preserving fruits and vegetables in the home.
——— The pickling and curing of meat in hot weather.
——— Some possibilities of the cowpea in Macon County, Alabama.
——— White and color washing with native clays from Macon County, Alabama.

WINTHROP NORMAL AND INDUSTRIAL COLLEGE OF SOUTH CAROLINA, ROCK HILL, S. C.

Frayser, Mary E. A plan for homekeepers' clubs in South Carolina. (Homekeepers' club bulletin, part 2.)
Infant care. *In preparation.*
Women's club programs in home economics.

UNIVERSITY OF WISCONSIN, MADISON, WIS.

Agricultural experiment station. Sewage disposal for country homes. (Circular of information, 34.)

MISCELLANEOUS BULLETINS.

AMERICAN HOME ECONOMICS ASSOCIATION, ROLAND PARK BRANCH, BALTIMORE, MD.

(Publications.)

Lake Placid conference on home economics, Proceedings, 1899–1908. $8.
Journal of home economics. Monthly. $2 a year.
Syllabuses. On home economics, food and shelter, 10 cents each.
Syllabus of home economics. 69 p. 50 cents. cloth.
Report of household aid co. An experiment in domestic service. 25 cents.
Reprints, 10 cents each:

An Adirondack home institute. By Mrs. Melvil Dewey	1902
Report of teaching-section conference	1907
Report of progress of food and nutrition. By C. F. Langworthy	1907
Study of textiles. By Nellie Crooks	1907
Report of progress in food and nutrition. By C. F. Langworthy	1908
College homes. By Martha Van Rensselaer	1908

Reprints, 10 cents each—Continued.

The college table as an educational factor. By Miriam N. Loomis....... 1908
Government publications on home economics. By C. F. Langworthy..... 1909
School feeding in Europe. By Louise Stevens Bryant.................... 1910
Standardizing the home. By J. R. Commons............................ 1910
Physiology and courses in home economics. By Percy C. Stiles.......... 1910
Chemistry for students of home economics. By James F. Norris.......... 1910
The amount of edible meat in the various cuts. By Flora H. Greene..... 1910
A review of recent investigations on domestic art. By C. F. Langworthy. 1910
Relation of biological chemistry to home economics. By. W. J. Gies..... 1910
Courses in bacteriology for home economics. By H. W. Conn............ 1910
Teaching bacteriology to mothers. By H. W. Hill........................ 1910
What courses in sociology, pure and applied, should be included in college departments of household science? By G. E. Howard; Courses in sociology. By C. A. Ellwood. 20 cents.................................. 1911
Household service as a labor problem. By I. M. Rubinow............... 1911
The home and the machine. By J. Lebowitz.......................... 1911
Plan, cost, and organization of kitchens and dining rooms. By Mrs. Dewey. 1912
Control of insect pests in institutions. By E. P. Felt.................... 1912
Purchasing and handling supplies for public institutions. By H. C. Wright 1912
Uniform accounting for institutions. By William Morse Cole............. 1912
State and municipal documents as sources of information on home economics. By C. F. Langworthy... 1912
A plea for the introduction of historical courses on the home into higher schools and colleges for young women. By Willystine Goodsell....... 1912
A course in household economics. By B. R. Andrews.................. 1913
Refrigerators. By Hermann T. Vulte. 5 cents.
Papers presented at administration section meeting, Lake Placid, N. Y., June, 1912, including reports of the committees; school lunch; laundry; uniform accounting for institutions; papers on practice fields for students; diet kitchen, etc. 50 cents.
Portrait of Ellen H. Richards. $0.25, $2, $3, $6, $8.

HEALTH-EDUCATION LEAGUE, 8 BEACON STREET, BOSTON, MASS.

(Health Booklets.)

Hints for health in hot weather, 2¢, $1.50 per 100.
Milk, 3¢, $2.50 per 100.
"Colds" and their prevention, 2¢, $1.50 per 100.
Meat and drink, 3¢, $2.50 per 100.
Healthful homes, 4¢, $3.00 per 100.
The successful woman, 4¢, $2.50 per 100.
The boy and the cigarette, 5¢, $3.00 per 100.
The care of little children, 4¢, $3.00 per 100.
The plague of mosquitoes and flies, 4¢, $3.00 per 100.
Tonics and stimulants, 2¢, $1.50 per 100.
Emergencies, 10¢, $6.00 per 100.
Microbes good and bad, 4¢, $3.00 per 100.
The efficient worker, 4¢, $2.75 per 100.
Sexual hygiene, 4¢, $2.50 per 100.
Health in labor camps, 3¢, $1.75 per 100.
Tuberculosis (consumption), 5¢, $3.00 per 100.
When to call the physician, 4¢, $2.50 per 100.
Habits of health, 4¢, $2.50 per 100.

Wastes and their disposal, 4¢, $2.50 per 100.
Typhoid fever, infection and prevention, 5¢, $3.00 per 100.
The observance of Health Day in schools, 4¢, $2.50 per 100.
Industrial hygiene, 7¢, $4.50 per 100.
Hygiene for workers, 6¢, $4.00 per 100.
Hygiene of exercise.
Nerve waste.
Health of the school child.

One dollar membership fee brings copies of all past bulletins and new ones issued during current year.

AMERICAN SCHOOL OF HOME ECONOMICS, CHICAGO, ILL.

I. Books on home economics for correspondence study and for schools. Published in twelve volumes, also in four volumes. Prices on application: The house:—its plan, decoration, and care, by Isabel Bevier, University of Illinois; Household bacteriology, by S. Maria Elliott, Simmons College; Household hygiene, by S. Maria Elliott; Chemistry of the household, by Margaret E. Dodd; Principles of cookery, by Anna Barrows, Teachers College, Columbia University and Chautauqua School of Cookery; Food and dietetics, by Alice P. Norton, formerly of University of Chicago; Household management, by Bertha M. Terrill, University of Vermont; Personal hygiene, by M. Le Bosquet; Home care of the sick, by Amy E. Pope; Textiles and clothing, by Kate H. Watson, formerly of Lewis Institute and University of Chicago; Study of child life, by Marion Foster Washburne, editor Mothers' magazine; Care of children, by Dr. A. C. Cotton, Rush Medical College, University of Chicago.

II. Bulletin: Freehand cooking on scientific principles, 10 cents; Food values. 10 cents; The up-to-date home—money and labor saving appliances, 15 cents.

HOUSEKEEPING EXPERIMENT STATION.

(Address: Mr. and Mrs. A. T. Child, 28 Hoyt St., Stamford, Conn.)

Bulletins (10 cents each): No. 1, Cooking and lighting with denatured alcohol; No. 2, Comfort in the kitchen; No. 3, Time and money savers; No. 4, The new housekeeping; No. 5, The country cooking school; No. 6, Cooking the cheaper cuts of meat; No. 7, The country kitchen; No. 8, The new house cleaning; No. 9, The new lamps; No. 10, The kitchenette.

Four bulletins on Housekeeping efficiency bound in pamphlet form $1.00: No. 11, Prevention of lost motions in housework; No. 12, Applied efficiency; No. 13, Serving dish cookery; No. 14, Utensil efficiency.

PROFESSOR McKEEVER'S HOME TRAINING BULLETINS.

(Address? Professor William A. McKeever, University of Kansas, Lawrence, Kans. Price, 2 cents each; $1.00 per hundred.)

1. The cigarette smoking boy; 2. Teaching the boy to save; 3. Training the girls to help in the home; 4. Assisting the boy in the choice of a vocation; 5. A better crop of boys and girls; 6. Training the boy to work; 7. Teaching the girl to save; 8. Instructing the young in regard to sex.

NATIONAL CHILD WELFARE EXHIBITION COMMITTEE, 200 FIFTH AVE. NEW YORK CITY.

I. Bulletins: Sample set, 25 cents, special price in quantities: 1. The history of the Child welfare exhibition movement. 2. Organization of a child welfare exhibit. 3. The cost. 4. The construction. 5. The floor plan. 6. Twelve good screens and why. 7. Screen plans (for use in preparing wall exhibits). 8. Screen plans as filled out by exhibitors. 9. Publicity committee. 10. Organization of explainers. 11. The program (living exhibits, entertainments, motion pictures, etc.). 12. After the child welfare exhibit what? 13. Neighborhood child welfare exhibits.

II. Exhibits for loan. The committee loans the following exhibit sections, at $5 and transportation charges per section, with reduced prices for larger quantities: Sex education and hygiene; Waste humanity (feeble-mindedness); Children's diseases (2 sections); Medical inspection; The school building; Open air schools; Vocational education; The education of the immigrant; The dependent child; Children's institutions; The child's food; Play; Public recreation; Social centers; Boy scouts of America; Camp fire girls; Infant mortality and care of babies (3 units from Russell Sage Foundation); School feeding (2 units from American home economics association); Psychological clinic of University of Pennsylvania (2 units).

CITIES AND TOWNS TEACHING HOUSEHOLD ARTS.

The following list gives, by States, the names of cities and towns in which the household arts are taught in the elementary or secondary schools. There are included 3,082 towns and cities and 2,440 high schools. The list was compiled from returns to an inquiry sent to local superintendents of schools in September, 1914, supplemented by the replies to earlier schedules sent out in connection with this study and by a special inquiry to State superintendents of public instruction in October, 1914. Complete returns are lacking from certain States, and there is not entire uniformity in the data presented.

The letters following the names of places have the following significance: "c" indicates that cooking is taught in the elementary grades; "s" that sewing is similarly taught in the elementary grades; "e" that either cooking or sewing is taught in the elementary grades, definite information not being available; "h" indicates that household arts is taught in the high school; the name of a town without any index letter indicates that household arts is taught in the public schools, but that definite information was not secured as to whether in the elementary school or high school, or in both; the presence of an index letter indicates that work was definitely reported of the type indicated, but the absence of either index letters does not indicate that such other work is not given (for example, in some States facts could be secured as to high-school work only, and many towns thereby entered for "h" only are doubtless also offering work in the grades; in another case exact data as to high schools may be lacking).

A list of 159 State normal schools that teach household arts is given in Part II of this report (Bulletin, 1914, No. 37, p. 127), and a list of 252 colleges teaching home economics is given in Part III (Bulletin, 1914, No. 38, p. 68).

CITIES AND TOWNS TEACHING HOUSEHOLD ARTS.

ALABAMA.

Almond—h
Anniston—s h
Attalla—s h
Birmingham—c s h
Birmingham (Ensley H. S.)—h
Dothan—c s h
Florence—c s h
Huntsville—h
Mobile High School—h
Mobile, Owens Academy—h
Montgomery—h
Selma—s h
Union Springs—h

County high schools.

Autauga Co. H. S., Prattville—h
Barbour Co. H. S., Clio—h
Bibb Co. H. S., Centerville—h
Blount Co. H. S., Oneonta—h
Calhoun Co., H. S., Oxford—h
Chambers Co. H. S., Milltown—h
Cherokee Co. H. S., Senter—h
Choctaw Co. H. S., Butler—h
Clarke Co. H. S., Groove Hill—h
Clay Co. H. S., Ashland—h
Cleburne Co. H. S., Heflin—h
Coffee Co. H. S., Enterprise—h
Colbert Co. H. S., Leighton—h
Conecuh Co. H. S., Castleberry—h
Coosa Co. H. S., Rockford—h
Covington Co. H. S., Florala—h
Cullman Co. H. S., Cullman—h
Dale Co. H. S., Ozark—h
Dallas Co. H. S., Plantersville—h
DeKalb Co. H. S., Fort Payne—h
Elmore Co. H. S., Eclectic—h
Escambia Co. H. S., Atmore—h
Etowah Co. H. S., Attalla—h
Franklin Co. H. S., Russellville—h
Geneva Co. H. S., Hartford—h
Henry Co. H. S., Headland—h
Houston Co. H. S., Columbia—h
Jackson Co. H. S., Scottsboro—h
Lamar Co. H. S., Vernon—h
Lauderdale Co. H. S., Rogersville—h
Lawrence Co. H. S., Moulton—h
Lee Co. H. S., Auburn—h
Limestone Co. H. S., Elkmont—h
Lowndes Co. H. S., Ft. Deposit—h
Macon Co. H. S., Notasulga—h
Madison Co. H. S., Gurley—h
Marengo Co. H. S., Thomaston—h
Marion Co. H. S., Guin—h
Marshall Co. H. S., Guntersville—h
Monroe Co. H. S., Monroeville—h
Morgan Co. H. S., Hartselle—h
Perry Co. H. S., Marion—h
Pickens Co. H. S., Reform—h
Pike Co. H. S., Brundidge—h
Randolph Co. H. S., Wedowee—h
Shelby Co. H. S., Columbiana—h
St. Clair Co. H. S., Odenville—h

Sumter Co. H. S., York—h
Talladega Co. H. S., Lincoln—h
Tallapoosa Co. H. S., Dadeville—h
Walker Co. H. S., Jasper—h
Wilcox Co. H. S., Camden—h
Winston Co. H. S., Double Springs—h

District agricultural schools.

First Dist. Agr. School, Jackson—h
Second Dist. Agr. School, Evergreen—h
Third Dist. Agr. School, Abbeville—h
Fourth Dist. Agr. School, Sylacauga—h
Fifth Dist. Agr. School, Wetumpka—h
Sixth Dist. Agr. School, Hamilton—h
Seventh Dist. Agr. School, Albertville—h
Eighth Dist. Agr. School, Athens—h
Ninth Dist. Agr. School, Blountsville—h
Northeast Alabama Agr. and Indus. Institute, Lineville—h

ARIZONA.

Benson—h
Bisbee—c s h
Clifton—h
Douglas—c s h
Glendale—h
Globe—c s h
Jerome—h
Mesa—h
Morenci—c s h
Nogales—h
Phoenix—c s h
Prescott—c s h
Tempe—h
Tombstone—h
Tucson—h
Willcox—h
Winslow—h
Yuma—h

ARKANSAS.

Arkadelphia—h
Conway—h
Crossett—h
Fayetteville—h
Fort Smith—s h
Hot Springs—h
Little Rock—s h
Magazine—h
Malvern—h
Palestine—h
Pine Bluff—h
Prescott—c h
Texarkana—c s h

State agricultural schools.

Jonesboro.
Magnolia.
Monticello.
Russellville.

CALIFORNIA.

Alameda—c s h
Alhambra—c s h
Anaheim—c s h
Antioch—e h
Arcata—e h
Arroyo Grande—e
Auburn—e h
Azusa—e h
Bakersfield—e h
Benicia—e
Berkeley—c s h
Bishop—h
Brawley—h
Brentwood—h
Burbank—e h
Calexico—e h
Centerville—h
Chico—c s
Chino—h
Claremont—e h
Clearwater—e
Clovis—e h
Coalinga—h
College City—h
Colton—c s h
Compton—h
Concord—e h
Corning—h
Corona—c s h
Coronado—e h
Covina—e h
Crescent City—h
Crockett—e h
Delano—h
Dinuba—h
Dos Palos—e h
East San Diego—e
El Centro—h
Elk Grove—h
Emeryville—s
Escondido—e h
Eureka—c s h
Exeter—h
Fallbrook—h
Ferndale—e h
Fillmore—h
Florence—e
Fort Bragg—e h
Fresno—c s h
Fullerton—e h
Galt—h
Gardena—e
Gilroy—e h
Glendale—c s h
Gorzales—e h
Graham—e
Grass Valley—c s
Gridley—h
Hanford—h
Hayward—h
Hemet—c h
Hermosa—e
Hollister—e h
Holtville—h
Huntington Beach—h
Huntington Park—h
Imperial—e h
Inglewood—e h
Irwin—h
Kerman—h
King City—h
Le Grand—e h
Lemoore—e h
Lindsay—h
Livermore—e h
Lodi—e h
Lompoc—h
Long Beach—h
Lordsburg—e h
Los Angeles—c s h
    Classical H. S.—h
    Gardena H. S.—h
    Hollywood H. S.—h
    Manual Arts H. S.—h
    Polytechnic H. S.—h
    San Pedro H. S.—h
    Wilmington H. S.—h
Los Banos—s c h
Los Gatos—e h
Madera—h
Marysville—s h
Mendocino—h
Merced—s h
Mill Valley—c s h
Modesto—c s h
Monrovia—e h
Monterey—e h
Mountain View—e h
Napa—s h
National City—e h
Needles—e h
Nevada City—s
Newman—e h
Oakdale—c s h
Oakland—e h
    Classical H. S.—h
    Polytechnic H. S.—h
    Fremont H. S.—h
Oceanside—e h
Oleander—h
Ontario—c s h
Orange—c s h
Oxnard—h
Pacific Grove—h
Palo Alto—c s h
Pasadena—c s h
Petaluma—c s h
Pleasanton—h

Pomona—c s h
Porterville—c h
Princeton—c h
Red Bluff—c h
Redding—h
Redlands—h
Redondo—c
Redondo Beach—c s h
Redwood City—c h
Reedley—h
Richmond—c s h
Riverside—c s h
Roseville—c h
Sacramento—c s h
Salinas City—c s h
San Anselm—c
San Bernardino—c s h
San Diego—c s h
San Dimas—c
San Fernando—h
San Francisco—c s h
  Girls H. S.—h
  Polytechnic H. S.—h
San Jacinto—h
San Jose—c s h
San Leandro—c
San Luis Obispo—c s h
San Mateo—c s h
San Pedro—c
San Rafael—c h
Santa Ana—c s h
Santa Barbara—c s h
Santa Clara—c s h
Santa Cruz—c s h
Santa Maria—h
Santa Monica—c h
Santa Paula—c h
Santa Rosa—c s h
Sanger—h
Sawtelle—c
Selma—c h
Sonora—h
South Pasadena—c s h
St. Helena—c h
Tulare—c s h
Turlock—c h
Ukiah—c h
Vacaville—c h
Vallejo—c s h
Venice—c h
Ventura—c h
Visalia—c s h
Watsonville—c s h
Weaverville—h
Whittier—c s h
Williams—h
Willows—c h
Woodland—s h
Yreka—h

COLORADO.

Alamosa—h
Arvada—h
Aspen—h
Black Hawk—h
Blanca—h
Boulder—c s h
Breckenridge—h
Brush—h
Canon City—h
Central City
Cheyenne Wells (Co. H. S.)—h
Colorado City
Colorado Springs—h
Cripple Creek—s h
Del Norte—h
Delta—h
Denver—h
Durango—c s h
Eaton—h
Edgewater—h
Florence—c s h
Fort Collin —s h
Fort Morgan—s
Fruita—h
Georgetown—h
Glenwood Springs—h
Golden—h
Granada (Co. H. S.)—h
Grand Junction—c s h
Greeley—h
Gunnison (Co. H. S.)—h
Hotchkiss—h
Idaho Springs—c s h
La Junta—h
La Mar—h
Las Animas—h
Leadville—c s h
Littleton—h
Longmont—c s h
Louisville—h
Loveland—c s h
Manitou—h
Monte Vista—h
Montrose—c s h
New Windsor—h
Palisade—h
Paonia—h
Pueblo—h
  Central H. S.—h
  Dist. No. 2 H. S.—h
Rocky Ford—s h
Salida—c s h
Silverton—h
South Canon—h
Sterling—s h
Telluride—h
Trinidad—s h
Victor—s h
Windsor—h

CONNECTICUT.[1]

Ansonia—s h
Bridgeport—c s h
Bristol—c s
Canton—s
Danbury—c s
Derby—c
Enfield—s
Hartford—c s h
Huntington
Manchester—c
Meriden—c s h
Middletown—c s h
Naugatuck—c s h
New Britain—c s h
New Haven—c s h
New London—h
Norwich—s
Putnam—c s h
Rockville—s
Salem—s
Shelton—c
Southington—s
South Manchester—c s
South Windsor—s
Stamford—c s h
Stonington—c s
Thomaston—s
Vernon—s
Wallingford—c
Waterbury—c s
Windham—s
Winsted—h

DELAWARE.

Dover
Wilmington—s h
  High School—h
  Howard H. S.—h

DISTRICT OF COLUMBIA.

Washington—c s h

FLORIDA.

Arcadia—h
Bradentown (Manatee Co. H. S.)—h
Clear Water—h
Crescent City—c
Dade City—h
Daytona—c h
Dunnellon
Jacksonville—h
Key West—h
Lake Butler—h
McIntosh
Madison
Manatee
Miami—c s h

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[1] See also page 61.

Ocala—c s h
Osceola—h
Palatka—e
Palmetto—h
Pensacola—h
Plant City—h
Punta Gorda—h
St. Petersburg—h
Sarasota—h
Starke—h
Tallahassee—h
Tarpon Springs—h
Tampa—c s h
Wauchula—h
West Palm Beach

GEORGIA.

Albany—h
Americus, Third Dist. Agr. and Mech. School—h
Augusta—c s h
Bambridge—h
Barnesville, Sixth Dist. Agr. School—h
Carrollton, Fourth Dist. Agr. and Mech. School—h
Clarkesville, Ninth Dist. Agr. School—h
Columbus—c s h
Douglas, Eleventh Dist. Agr. School—h
Elberton—c h
Fitzgerald—c s h
Hephzibah—h
Gainesville—c s
Granite Hill, Tenth Dist. Agr. School—h
Macon—h
Madison, Eighth Dist. Agr. School—h
Monroe, Fifth Dist. Agr. and Mech. School—h
Moultrie—c s h
Powder Springs, Seventh Dist. Agr. School—h
Sandersville—c s h
Savannah—h
Statesboro, First Dist. Agr. School—h
Tifton, Second Dist. Agr. School—h

IDAHO.

American Falls
Bellevue
Blackfoot
Boise—c s h
Bonners Ferry
Buhl
Burley
Caldwell—c s h
Coeur d'Alene
Dietrich
Gooding
Grangeville
Idaho Falls—s h
Jerome
Kamiah
Lapwai
Lewiston—c s h
Middleton
Montpelier
Moskow—h
Nampa—h
Parma
Payette
Pocatello—c s h
Richfield
Rigby—h
Sandpoint—c s h
St. Anthony
Twin Falls
Wallace
Weiser

ILLINOIS.

Aledo—e
Alexis—h
Alton—c s h
Amboy—h
Armington Twp.—h
Assumption Twp.—h
Atlanta—h
Aurora (East)—h
Aurora (West)—h
Aurora, Jennings Seminary—h
Averyville—c s h
Avon—e
Barrington—h
Batavia—c s h
Beardstown—s h
Bellflower Twp.
Benton Twp.—h
Bismarck Twp.—h
Bloomington—e h
Blue Island Twp.—c s h
Bridgeport Twp.—h
Buckley—h
Cairo—c s h
Calvin—e
Canton—c s h
Carbondale—e h
Carrollton—e h
Centralia Twp.—h
Champaign—c h
Charleston—e
Chicago—c s h
    Austin H. S.—h
    J. H. Bowen H. S.—h
    Calumet H. S.—h
    Curtis H. S.—h
    Englewood H. S.—h
    Hyde Park H. S.—h
    Lucy Flower School of Mechanic Arts—h
    Lake View H. S.—h
    Marshall H. S.—h
    McKinley H. S.—h
    Medill H. S.—h
    Nicholas Senn H. S.—h
    Parker H. S.—h
    Schurz H. S.—h
    Wendell Phillips H. S.—h
Chicago Heights, Bloom Twp.—e h
Cissna Park—h
Clayton—h
Clinton—c s h
Clyde, Cicero Twp. H. S.—h
Collinsville Twp.—s h
Crystal Lake—h
Danville—c s h
Decatur—c s h
Dekalb Twp.—s h
Dekalk Normal H. S.—h
Delavon—h
Des Plaines Twp.
Dixon—s h
    North Dixon—s h
Dundee—h
Duquoin—h
Dwight—e h
East Aurora—h
East St. Louis—c s h
Edwardsville—c s h
Effingham—c s h
Elgin—c s h
Evanston—c s
Fairbury—c s h
Farmer City Twp. H. S.—h
Flora—Harter-Stanford Twp.
Freeport—c s h
Galena—h
Galesburg—s h
Galva—s h
Geneseo Twp.—c s h
Geneva—h
Gibson City, Drummer Twp.—h
Granite City—s h
Greenfield—h
Harrisburg Twp.—h
Harlem Consolidated School—h
Harvard—s h
Harvey, Thornton Twp.—h
Havana—c s h
Henry—h
Herrin Twp.
Highland—s
Highland Park, Deerfield Twp.—s h
Hinsdale Twp.—h
Hoopestown—s
Industry Twp.—h
Jacksonville—h
Joliet Twp.—s h
Kankakee—s h
Kenilworth, New Trier Twp.—h
Kewanee—h
Kingman—h
Kirkwood—h
Lake Forest, Ferry Hall—h

La Salle, Peru Twp. H. S.—h
Lawrenceville Twp.—h
Le Roy—h
Lexington—h
Lincoln—e
Litchfield—c s h
Lockport Twp.—h
McNabb, John Sweany Consolidated School—h
Macomb, Normal H. S.—h
Marion Twp.—s h
Marissa Twp.—h
Marseilles—s h
Mattoon—c s h
Maywood, Proviso Twp.—s h
Mazon Twp.—h
Mendota—s h
Minonk—h
Moline—c s h
Monmouth—s h
Morgan Park Twp.—c s h
Morris—c s h
Morton Twp.—c s h
Mound City—h
Mount Carmel—c h
Mount Carroll, Francis Shimer School—h
Mount Pulaski Twp.—h
Mount Vernon Twp.—h
Murphysboro Twp.—c s h
Naperville—s
Neoga Twp.—h
Newman Twp.—h
Normal—c s h
Oak Park and River Forest Twp.—c s h
Oglesby—s h
Onarga H. S.—h
Onarga, Grand Prairie Seminary—h
Ottawa Twp.—c s h
Pawnee Twp.—h
Pana Twp.—c s h
Paris—s h
Park Ridge—e
Paxton—s h
Pekin—c s h
Peoria—e h
Peoria, Manual Training H. S.—h
Piano—e h
Polo—e
Pontiac Twp.—c s h
Princeton Twp.—s h
Quincy—c s h
Quincy, St. Mary's Academy—h
Ridgefarm—h
Riverside, Riverside-Brookfield Twp.—h
Robinson Twp.—h
Rochelle—s h
Rockford—c s h
Rock Island—c s h
Rollo (Consolidated)—h
Roseville Twp.—h
Sandwich—s
Savanna Twp.—e h
Shabbona—h
Sheffield—h
Shelbyville—c s h
South Chicago—h
Springfield—c s h
Spring Valley—h
Stanford—h
Sterling Twp.—s h
Stockland Twp.—h
Streater Twp.—c s h
Sycamore—e h
Taylorville Twp.—c s h
Tiskilwa Twp.—h
Toulon Twp.—h
Urbana—c s h
Virginia—h
Watseka—h
Waukegan Twp.—e h
White Hall—e h
Wilmette—e
Wilmington—e
Winnetka—e

INDIANA.[1]

Advance—h
Albion—h
Alexandria—c s
Ambia—h
Amboy—h
Anderson—c s h
Angola—s h
Arcadia—h
Ashley—h
Atlanta—h
Attica—c s h
Auburn—s h
Batesville—h
Battle Ground—h
Bedford—c s h
Berne—h
Bicknell—c s h
Bloomington—c s h
Bluffton—c s h
Booneville—c s h
Boswell—h
Brazil—c s h
Bremen—h
Broad Ripple—h
Brook—h
Brookville—h
Bunker Hill—h
Cambridge City—h
Camden—h
Carthage—h
Charlestown—h
Chester—h
Clinton—c s h
Cloverdale—h
Colfax—h
College Corner—h
Columbia City—c s h
Columbus—c s h
Connersville—c s h
Converse—h
Covington—h
Crawfordsville—c s h
Crown Point—c s h
Culver—h
Cumberland—h
Cynthiana—h
Danville—h
Dayton—h
Decatur—h
Decker—h
Delphi—h
Dublin—h
Dunkirk—h
East Chicago—c s h
Edinburg—h
Elkhart—h
Elnora—h
Elwood—c s h
Evansville—c s h
Fairmount—c s h
Farmersburg—h
Farmland—h
Flora—h
Fort Wayne—c s h
Fountain City—h
Frankfort—h
Franklin—c s h
Fremont—h
French Lick—h
Galveston—h
Garrett—s h
Gary—c s h
Gas City—c s h
Goshen—c s h
Grass Creek—h
Green Township (P. O., Ridgeville)—h
Greencastle—c s h
Greenfield—h
Greensburg—h
Greensfork—h
Hammond—h
Hanna—h
Harlan—h
Hartford City—h
Helt Township (Dana P. O.)—h
Hillsboro—h
Huntington—s h
Hymera—h
Indianapolis—c s h
Jasonville—s h
Kendallville—s h
Kokomo—s h
Lafayette—c s h
Laporte—c s h

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[1] By the new law, all Indiana high schools must each domestic science; the above list is based on 1913-14 reports.

Lebanon—c s
Linton—c s h
Madison—c s h
Michigan City—c s h
Mishawaka—c s h
Montpelier—c s h
Mount Vernon—s h
Muncie—c s h
New Albany—c s h
New Castle—c s h
North Vernon—c s h
Peru—c s h
Plymouth—c s h
Portland—s h
Richmond—c s h
Rochester—s h
Rockport—c s h
Rushville—s h
Seymour—c s h
Shelbyville—c s h
South Bend—c s h
Sullivan—s h
Tell City—s h
Terre Haute—h
Valparaiso—c s h
Wabash—s h
Warsaw—s h
Washington—c s h
Westfield—h
West Lafayette—c s h
West Terre Haute—c s h
Whiting—s h
Winchester—c s h

IOWA.

Adair—h
Adel—h
Albia—c s h
Algona—h
Allerton—h
Ames—c s h
Anamosa—s h
Atlantic—h
Audubon—h
Avoca—h
Bedford—h
Belle Plaine—c s h
Belmond—h
Boone—s h
Britt—h
Brooklyn—h
Buffalo Center—h
Burlington—c s h
Carroll—c s h
Castana—h
Cedar Falls—c s h
Cedar Rapids—c s h
Centerville—h
Chariton—h
Charles City—c s h
Cherokee—c s h
Cincinnati—h
Clarinda—s h
Clarion—h
Clear Lake—h
Clinton—s h
Coin—h
Colfax—h
College Springs—h
Corning—h
Correctionville—h
Corydon—h
Council Bluffs—s h
Cresco—c s h
Creston—s h
Dallas Center—h
Davenport—c s h
Denison—c s h
Des Moines—c s h
Des Moines, College Academy—h
De Witt—h
Dubuque—c s h
Eagle Grove—h
Earlham—h
Eldora—h
Elkader—h
Emmetsburg—h
Estherville—h
Exira—h
Fairfield—c h
Farmington—h
Fonda—h
Forest City—h
Fort Dodge—c s h
Fort Madison—c s h
Garden Grove—h
Garner—h
Glenwood—c s h
Grand Junction—h
Greene—h
Greenfield—h
Grinnell—s h
Griswold—h
Grundy Center—h
Guttenberg—h
Hampton—c s h
Harlan—h
Hartley—h
Hawardan—h
Humboldt—h
Ida Grove—h
Independence—s h
Indianola—h
Inwood—h
Iowa City—h
Keokuk—c s h
Keosauqua—h
Knoxville—h
Lake City—h
Lake Mills—h
Lamoni—h
Le Mars—c s h
Lenox—h
Leon—h
Logan—h
Malvern—h
Manchester—s h
Manning—h
Mapleton—h
Maquoketa—c s h
Marathon—h
Marcus—h
Marengo—h
Marion—c s h
Marshalltown—c s h
Mason City—c s h
Mechanicsville—h
Mediapolis—h
Milford—h
Missouri Valley—h
Montezuma—h
Monticello—h
Moravia—h
Moulton—h
Mount Ayr—h
Mount Pleasant—h
Muscatine—s
Nashua—h
Nevada—h
New Hampton—h
New Providence—h
Newton—c s h
North English—h
Northwood—h
Oakland—h
Odebolt—h
Oelwein—c s h
Ogden—h
Onawa—h
Osage—h
Osceola—h
Oskaloosa—s h
Ottumwa—c s h
Panora (Guthrie Co. H. S.)—h
Perry—c s h
Primghar—h
Red Oak—s h
Reinbeck—h
Rockford—h
Rock Rapids—h
Rock Valley—h
Rockwell City—h
Rolfe—h
Sac City—h
Seymour—h
Sheldon—c s h

Shell Rock—h
Shenandoah—c h
Sibley—h
Sidney—h
Sigourney—h
Sioux Center—h
Sioux City—c s h
Spencer—s h
Spirit Lake—h
Storm Lake—h
Story City—h
Strawberry Point—h
Stuart—h
Sutherland—h
Tabor—h
Tipton—h
Toledo—h
Traer—h
Villisca—h
Vinton—h
Walker—h
Wapello—h
Washington—c h
Waterloo—c s
Waukon—h
Webster City—h
Waverly—c s h
West Liberty—h
West Union—h
What Cheer—h
Williamsburg—h
Winfield—h
Winterset—h
Woodbine—h

KANSAS.

Abilene—h
Alden—h
Alma—h
Altamont, Labette Co. H. S.—h
Altoona—h
Argenia—h
Arkansas City—c s h
Ashland—h
Atchison—h
Atwood, Rawlins County H. S.—h
Augusta—h
Baldwin—h
Baxter Springs—h
Belle Plaine—h
Belleville—h
Beloit—h
Bladwin—h
Blue Rapids—h
Bonner Springs—h
Bronson—h
Bucklin—h
Buffville—h
Bunkerhill—h
Burlingame—h
Burlington—h
Burns—h
Burr Oak—h
Burrton—h
Caldwell—h
Caney—s h
Cawker City—h
Chanute—c s h
Chapman—h
Chase—h
Chase County H. S.—h
Cheney—h
Cherokee—h
Cherryvale—h
Clay Center—s
Clifton—h
Clyde—h
Coffeyville—c s h
Colby, Thomas Co. H. S.—h
Cold Water—h
Colony—h
Columbus—h
Columbus, Cherokee Co. H. S.—h
Concordia—h
Cottonwood Falls,
Council Grove—h
Delphos—h
Douglass—h
Effingham—h
Eldorado—c s h
Ellinwood—h
Ellis—h
Ellsworth—h
Emporia—s h
Erie—h
Eskridge—h
Eureka—h
Fairview—h
Florence—h
Formosa—h
Fort Scott—s h
Frankfort—h
Fredonia—s h
Frontenac—h
Galena—h
Garden City—c s h
Garnett—h
Gas City—h
Girard—h
Glen Elder—h
Goodland, Sherman County H. S.—h
Great Bend—c s h
Greensberg, Kiowa Co. H. S.—h
Halstead—h
Harper—h
Harrington—s
Hartford—h
Hays—h
Herington—h
Hiawatha—s h
Highland—h
Highland Park—h
Hill City—h
Hoisington—h
Holton—h
Horton—s h
Howard—h
Hoxie, Sheridan Co. H. S.—h
Humboldt—s h
Hutchinson—s h
Independence—c s
Iola—s h
Jewell City—h
Junction City—s h
Kansas City—s h
Kincaid—h
Kingman—s h
Kingsley—h
Kiowa—h
Lafontaine—h
LaCygne
Laharpe—h
Lakin—h
Lansing
Lawrence—c s h
Leavenworth—c s h
Lehigh—h
Leon—h
Le Roy—h
Liberal—h
Lindsberg—h
Lincoln—h
Linwood—h
Logan—h
Lovewell, Sinclair Twp. H. S.—h
Lyons—h
Macksville—h
McPherson—h
Madison—h
Maize—h
Manhattan—h
Mankato—h
Marion—h
Marysville—h
Meade—h
Medicine Lodge—h
Minneapolis—h
Minneola—h
Moline—h
Moran—h
Mound City—h
Natoma—h
Neodesha—c s h
Neosha Falls—h
Newton—c s h
Nickerson—h
Norton, Norton Co. H. S.—h
Norwich—h

Oakland—h
Oakley—h
Oberlin—h
Olathe—c s h
Onagee—h
Osage City—h
Oskaloosa—h
Oswego—h
Ottawa—s h
Paola—c h
Parsons—s h
Pawnee Rock—h
Peabody—h
Perry—h
Phillipsburg—h
Pittsburg—h
Plainville—h
Pleasanton—h
Pratt—h
Rock Creek (Ottawa)
Rosedale—s h
Rossville—h
Russell—h
Sabetha—h
St. John—h
Salina—h
Scott City, Scott County H. S.—h
Sedgwick—h
Seneca—h
Smith Center—h
Soldier—h
Spearville—h
Springhill—h
Stafford—h
Stark—h
Sterling—h
Stockton—h
Sylvan—Grove—h
Syracuse—h
Thayer—h
Tonganoxie—h
Topeka—c h
Toronto—h
Towanda—h
Tribune, Greeley Co. H. S.—h
Troy—h
Udall—h
Valley Falls—h
Valley Center—h
Wakeeney, Trego County H. S.—h
Wakefield—h
Wamego—h
Washington—h
Wathena—h
Wellington—s
Wellington, Sumner County H. S.—h
Wellsville—h
Westmoreland—h
Westphalia—h
Wichita—h
Williamsburg—h
Wilson—h
Winfield—c s h
Yates Center—h

KENTUCKY.

Bowling Green—c s h
Calhoun (County H. S.)—h
Central City—c s h
Covington—c s h
Danville—c
Earlington—c s h
Elizabethtown (County H. S.)—h
Eminence—h
Frankfort—h
Henderson—h
Hickman—c s h
Lexington
Louisville (Central H. S.)—h
Newport—c s h
Owensboro—s h
Owensboro (Western H. S.)—h
Paris—s
Richmond (H. S.)—h
Somerset—s h
Wingo—h

LOUISIANA.

Abbeville
Amite
Ansley
Arcadia
Baywood
Baton Rouge
Baton Rouge, East, 7th ward
Bell City
Bellevue (Leesville P. O.)
Bienville
Bogulasa
Bourge
Broussard
Brusley
Bunkie
Calhoun
Carencro
Chauvin
Cheneyville
Choudrant
De Ridder
De Quincey
Dodson
Donaldson—c h
Donner
Dry Creek
Duback
Dutchtown
Ebenezer
Eros
Eunice
Farmerville
Franklinton
Gibsland
Gibson
Goldona
Grand Prairie (Cataro P. O.)
Grayson
Gretna
Gueydon
Hammond
Harelson
Haynesville
Homer
Hornbeck
Jackson
Jena
Kinder
Lake Arthur
Lake Charles
Lake Providence
Longville
Lillie
Linville
Lutcher
Many
Marksville—h
Merryville
Minden
Monroe—h
Montegut
Monterey
Morgan City—c s
New Orleans—c s h
Oak Grove:
  Ascension Parish
  West Carroll Parish
Olla
Opelousas
Plaquemine
Pelican
Ponchatoula
Pride
Rayne
Shongaloo
Shreveport—h
Simpson
Simsboro
Singer
Spring Hill
St. Francisville
St. Joseph
St. Martinsville
Stonewall
Sugartown
Sulphur

Tallulah
Verda
Vidalia
Vidrine
Vinton
Walker
Wallace
Westlake
White Castle
Winnfield
Winnsboro
Zachary
Zwolle

MAINE.

Auburn—c s h
Augusta—c
Bangor—e h
Bath—e h
Benton—e
Brewer—s
Bridgton—e
Brooks—e
Bucksport—h
Brunswick—e h
Camden e h
Cornish—e h
Eden—e h
Fairfield—e h
Houlton (1915)
Lewiston—c s h
Livermore Falls—e h
Madison—e h
Millinocket—e
Oakland—e
Parsonsfield—h
Pittsfield—h
Portland—e h
Rockland—c s h
Rumford—c s h
Saco—c s
Sanford—c s h
Skowhegan—c s h
Topsham—e h
Waterville—c s h
Westbrook—e h
Wilton—h
Windham—e
Winslow—e
Yarmouth—e

MARYLAND.

Aberdeen—h
Annapolis—h
Baden—h
Baltimore—c s
Berlin—h
Brookeville—h
Brunswick—h
Cambridge—h
Catonsville—h
Centreville—h
Central—h
Chestertown—c s h
Clinton—h
Cumberland—h
Delmar—h
Denton—h
Easton—h
Elkton—h
Ellicott City—h
Federalsburg—h
Franklin—h
Frederick (Girls' H. S.)—h
Frostburg—h
Gaithersburg—h
Hagerstown (Girls' H. S.)—s h
Havre de Grace—h
Laurel—h
Lonaconing—h
Montgomery County—h
North East—h
Oakland—h
Oxford—h
Pocomoke—h
Preston, Agri. H. S.—h
Princess Anne—h
Reisterstown—h
Ridgely, Agri. H. S.—h
Rock Hall—h
Rockville—h
Salisbury—h
Sandy Spring—h
Sharptown—h
Snow Hill—h
Sparks—h
Sparrows Point—h
Stockton—h
Towson—h
Westminster—h

MASSACHUSETTS.

Abington—s
Adams—c s h
Amesbury—s h
Andover—s h
Athol—s h
Attleboro—s
Belmont—s h
Beverley—c s h
Boston—c s h
  Brighton H. S.—h
  Charlestown H. S. —h
  Dorchester H. S.—h
  East Boston H. S.—h
  Hyde Park H. S.—h
  Roxbury H. S.—h
  Practical Arts H. S.—h
Braintree—e
Brockton—s h
Brookline—h
Cambridge—c s
Chelmsford—c s h
  Central H. S.—h
  North H. S.—h
Chelsea—s
Clinton—c s h
Cohasset—h
Concord—c s h
Dalton—h
Danvers—s
Dartmouth—e
Dedham—c s h
Easton (North)—c s h
Everett—s h
Fairhaven—c s h
Fall River—e
  Technical H. S.—h
Falmouth—h
Fitchburg—h
Framingham—c s h
Gardner—e h
Gloucester—s h
Grafton—s
Great Barrington—c s h
Greenfield—c s h
Hadley—h
Haverhill—c s h
Hingham—e
Holden—h
Holyoke—s h
Hudson—s h
Ipswich—e h
Lancaster—h
Lawrence—h
Leominster—c s h
Lexington—e
Lowell—c s
Lynn—c h
  Classical H. S.—h
  English H. S.—h
Malden—c s h
Manchester—h
Marlboro—c s h
Maynard—e
Medford—h
Melrose—e
Methuen—c s h
Milford—h
Milton—e h
Monson—e
Montague—s h
Nantucket—h
Natick—c s h
Needham—h
New Bedford—c s h
Newburyport—c s h
Newton—c s h
  High School—h
  Technical H. S—h
Northampton—e

North Andover—h
North Attleboro—c s h
Northbridge—c s h
Norwood—c s
Orange—c h
Palmer—s
Peabody—s
Pittsfield—c s
Plymouth—c s h
Quincy—c s h
Reading—s
Revere—s h
Rockland—s h
Saugus—c s h
Somerville—c s h
Southbridge—s h
South Framingham—h
Springfield—c s h
  Central H. S.—h
  Technical H. S.—h
Stoneham—s
Stoughton—c
Swampscott—c s
Taunton—s h
Wakefield—s
Walpole—h
Waltham—c s h
Ware—s
Warren—c
Watertown—c s h
Webster—h
Wellesley—c h
Westfield—c s
Weston—h
Weymouth—s h
Whitman—s h
Winchendon—c s h
Winchester—c s h
Winthrop—s h
Worcester—c s

MICHIGAN.

Adrian—c s h
Albion—c s
Allegan—c s h
Alma—c s h
Ann Arbor—c s h
Battle Creek—c s h
Bay City—c s h
Belding—s h
Bellaire
Bessemer
Benton Harbor—c s h
Big Rapids—c s h
Bloomingdale
Boyne City—c s h
Cadillac—c s h
Calumet—c s h
Cassopolis—h
Charlotte—s
Cheboygan
Coldwater—c s h
Crystal Falls—c s h
Detroit—c s h
East Jordan—s
Eaton Rapids—h
Escanaba—s h
Fennville—h
Flint—c s h
Galesburg
Grand Ledge—h
Grand Rapids—c s h
Greenville
Hancock
Harbor Beach
Hastings—c s h
Highland Park—c s h
Hillsdale—c s h
Holland—c s h
Houghton—c s h
Ionia—c s h
Iron Mountain—c s h
Iron River—h
Ironwood—c s h
Ishpeming—h
Jackson—c s h
Kalamazoo—c s h
Kingston
Lake City
Lake Linden—h
Lansing—c s h
Lapeer—c s h
Laurium
Ludington—c s h
Luther
Mancelona
Manistee—h
Manistique—c s h
Marquette—c s h
Marshall
Menomonie—c h
Midland—c s h
Monroe—c s h
Montgomery
Mount Clemens—c s h
Mount Pleasant—c s h
Muskegon—c s h
Nashville
Negaunee—c s h
Niles—c s h
North Adams—h
Norway—c s h
Onaway—s
Owosso
Otsego—s
Painesdale—h
Paw Paw
Pinconning
Plymouth
Pontiac—c s h
Port Huron—s h
River Rouge—s h
Saginaw (west side)—c s h
Saginaw (east side)—c s h
Sault Ste. Marie—c s h
South Haven—c s h
St. Claire—s
St. Johns—s
St. Joseph—c s h
St. Louis
Stambaugh
Three Rivers—s h
Travers City—c s h
Wakefield—h
Wyandotte—c s h
Ypsilanti—c s h

MINNESOTA.

Ada—h
Adrian
Akeley—h
Albert Lea—c s h
Alexandria—c s h
Annandale
Anoka—c s h
Argyle—h
Arlington
Atwater
Austin—c s h
Bagley—h
Barnesville—h
Beardsley
Bemidji
Benson
Bird Island
Biwabik—h
Blackduck—s h
Blooming Prairie—h
Blue Earth—h
Brainerd
Breckenridge
Brooten
Browns Valley
Buffalo
Caledonia
Cambridge—h
Canby
Carlton
Cass Lake
Chatfield
Chisholm—c s h
Cloquet—c s h
Cokato
Coleraine—h
Cottonwood—h
Crookston—c s h
Dassel
Dawson
Deer River
Detroit—s h

Dodge Center
Duluth—c s h
East Grand Forks—c s h
Elbow Lake
Elk River—h
Elmore
Ely—c s h
Eveleth—c s h
Fairfax
Fairmont—s h
Faribault—c s h
Fergus Falls—c s h
Fertile—h
Fosston
Fulda
Gilbert
Glencoe
Graceville
Grand Rapids—h
Granite Falls
Grove City
Hallock
Harmony
Hastings—s h
Hector—h
Henderson
Herman
Hibbing—c s h
Hinckley
Hopkins
Hoskins—s h
Howard Lake—h
Hutchinson
International Falls
Jackson
Jordan—h
Kasota—h
Kasson
Lake City—c s h
Lake Crystal
Lakefield
Lanesboro
Le Roy
Le Sueur—h
Le Sueur Center
Lewiston
Litchfield—h
Little Falls—c h
Long Prairie
Luverne—s
Lyle
McIntosh
Madelia
Madison
Mahnomen
Mankato—c s h
Mantorville
Maple Lake
Mazeppa
Medford
Melrose—s h
Milaca
Minneapolis—c s h
  Central H. S.—h
  East H. S.—h
  North H. S.—h
  West H. S.—h
  South H. S.—h
Minneota
Montevideo—c s h
Montgomery
Monticello
Moorhead—s h
Morgan
Morristown
Mountain Lake
Nashwauk
New London
New Richland
New Ulm—c s h
North Branch
Northfield
Norwood
Olivia
Ortonville—h
Owatonna—c s h
Park Rapids—c s h
Pine City
Pine Island
Pipestone
Plainview
Preston
Red Lake Falls
Red Wing—h
Redwood Falls—h
Renville—h
Rochester
Roseau
Royalton
Rush City
Rushford
St. Cloud—c s h
St. James—h
St. Paul—c s h
  Humboldt H. S.—h
  Normal H. S.—h
St. Louis Park
St. Peter—s h
Sandstone
Sauk Center
Sauk Rapids—h
Shakopee
Slayton
Sleepy Eye—h
South St. Paul—c s h
Spring Grove—h
Spring Valley—h
Staples
Stephen—h
Stewart
Stewartville
Stillwater—s h
Thief River Falls—c s h
Truman
Two Harbors—s h
Villard
Virginia—c s h
Wabasha—c s h
Wadena
Walker
Warren—h
Waseca—c s h
Waterville
Wayzata
Wells
Westbrook
West Concord
Wheaton—h
White Bear
Wilmar—s h
Windom
Winona—c s h
Winnebago
Winthrop
Worthington

MISSISSIPPI.

Biloxi—c s h
Columbus—c h
Greenville—h
Hattiesburg—h
McComb City—h
Meridian—h
Vicksburg—h

County agricultural high schools.

Alcorn Co. Agr. H. S., Kossuth—h
Bolivar Co. Agr. H. S., Cleveland—h
Calhoun Co. Agr. H. S., Derma—h
Chickasaw Co. Agr. H. S., Buena Vista—h
Clay Co. Agr. H. S., Pheba—h
Desoto Co. Agr. H. S., Olive Branch—h
Forrest Co. Agr. H. S., Brooklyn—h
Franklin Co. Agr. H. S., Meadville—h
Greene Co. Agr. H. S., Leaksville—h
Harrison Co. Agr. H. S., Perkinston—h
Holmes Co. Agr. H. S., Goodman—h
Jasper Co. Agr. H. S., Bay Springs—h
Jefferson Co. Agr. H. S., Union Church—h
Jones Co. Agr. H. S., Ellisville—h
Kemper Co. Agr. H. S., Scooba—h
Lamar Co. Agr. H. S., Purvis—h
Leake Co. H. S., Lena—h
Lafayette Co. Agr. H. S., Oxford—h
Marshall Co. Agr. H. S., Slayden—h
Madison Co. Agr. H. S., Camden—h
Montgomery Co. Agr. H. S., Kilmichael—h
Newton Co. Agr. H. S., Decatur—h

- Noxubee Co. Agr. H. S., Mashulaville—h
- Oktibeha Co. Agr. H. S., Long View—h
- Panola Co. Agr. H. S., Courtland—h
- Pearl River Co. Agr. H. S., Poplarville—h
- Rankin Co. Agr. H. S., Johns—h
- Simpson Co. Agr. H. S., Mendenhall—h
- Smith Co. Agr. H. S., Mize—h
- Scott Co. Agr. H. S., Harperville—h
- Sunflower Co. Agr. H. S., Morehead—h
- Tippah Co. Agr. H. S., Chalybeate—h
- Tishomingo Co. Agr. H. S., Tishomingo City—h
- Tunica Co. Agr. H. S., Tunica—h.
- Wilkinson Co. Agr. H. S., Woodville—h
- Wayne Co. Agr. H. S., Clara—h
- Winston Co. Agr. H. S., Noxa Pater—h
- Yazoo Co. Agr. H. S., Benton—h.

MONTANA.

- Anaconda—c s h
- Big Timber—h
- Billings—h
- Bonner—h
- Bozeman—s h
- Butte—c s h
- Columbus
- Conrad
- Dillon—h
- Great Falls—c s h
- Havre—h
- Helena—c h
- Kalispell—h
- Laurel
- Lewiston—c s h
- Livingston—s h
- Miles City—c s h
- Missoula—c s h
- Phillipsburg—h
- Red Lodge—c s h

MISSOURI.

- Ash Grove
- Bonne Terre
- Boonville—s
- Brookfield—c s h
- California
- Cape Girardeau—h
- Carthage
- Caruthersville—h
- Centralia
- Charleston—h
- Chillicothe—h
- Clayton—h
- Columbia (colored)
- De Soto—s h
- Eldon
- Excelsior Springs—s h
- Festus—s
- Flat River—c s h
- Fredericktown—c s h
- Gallatin
- Hannibal—c s h
- Hannibal (colored)
- Humansville
- Independence—s h
- Jefferson City—s h
- Joplin—s h
- Kansas City—c s h
    - Central H. S.—h
    - Lincoln H. S.—h
    - Manual Training H. S.—h
    - Northeast H. S.—h
    - Westport H. S.—h
- Kearney
- Kennett—s
- Kirksville—c s h
- Lamar—h
- Lebanon
- Lexington (colored)
- Liberty—c s h
- Lockwood
- Malden
- Mansfield
- Maplewood—c s h
- Maryville—s h
- Mexico—c s h
- Monroe City—h
- Montgomery City
- Mountain Grove
- Neosho—s h
- Nevada—s h
- Paris
- Poplar Bluff—h
- St. Joseph—c s h
- St. Joseph, Central H. S.—h
- St. Louis—c s h
    - Central H. S.—h
    - McKinley H. S.—h
    - Soldan H. S.—h
    - Summer H. S.—h
    - Yeatman H. S.—h
- Sedalia—c s h
    - Colored H. S.
- Springfield—c h
    - Lincoln H. S—h
    - Colored H. S.
- Washington—s
- Webb City—h
- Webster Groves—h
- West Plains—h

NEBRASKA.

- Albion—h
- Alliance—s h
- Alma—h
- Aurora—c s h
- Bartley—h
- Beatrice—s h
- Beaver City—h
- Bellevue (Pioneer Union H. S.)—h
- Blair—h
- Broken Bow—h
- Central City—h
- Chadron—h
- Columbus—h
- Crete—h
- Edgar—h
- Exeter—h
- Fairbury—h
- Fairfield—h
- Falls City—c h
- Franklin—h
- Fremont—h
- Geneva—h
- Gothenburg—h
- Grand Island (Wasmer H. S.)
- Hartington—h
- Hastings—s h
- Havelock—h
- Hebron—h
- Holdrege—c s h
- Humboldt—h
- Kearney—c s h
- Kenesaw—h
- Kimbal—h
- Lexington—h
- Lincoln—c s h
- Madison—h
- Minden—h
- McCook—h
- Nelson—h
- Newman Grove—h
- Norfolk—h
- Omaha—s h
- South Omaha—s h
- Ord—h
- Osceola—h
- Red Cloud—h
- Spencer—h
- St. Edwards—h
- St. Paul—h
- Scottsbluff—h
- Tekamah—h
- University—c s h
- Wahoo—h
- Wayne—h
- West Point—h
- Wymore—h
- York—s h

NEVADA.

- Bunkeville—h
- Carson City
- Elko (Elko Co. H. S.)—h
- Ely (White Pine Co. H. S.)—h
- Imlay—c
- Las Vegas (Clark Co. H. S.)—h
- Reno
- Wells—h

NEW HAMPSHIRE.

Alton—h
Amherst—h
Antrim—h
Appleton Academy, New Ipswich—h
Ashland—h
Atkinson Academy—h
Berlin c s h
Charlestown—h
Claremont—s
Colby Academy, New London—h
Colebrook Academy—h
Concord—c s h
Derry—h
Dover—c s h
Errol—h
Fitzwilliam—h
Franklin—h
Gilminton—h
Groveton—h
Hampton Academy—h
Haverhill Academy—h
Hinsdale—h
Hopkinston—h
Keene—c s h
Kimball Union Academy, Meriden—h
Laconia—c s h
Lancaster—h
Lebanon—h
Lisbon—h
Manchester—c s
Nashua—h
New Hampton Literary Institution—h
Newport—h
Penacook—h
Peterborough—h
Pinkerton Academy, Derry—h
Portsmouth—h
Proctor Academy, Andover—h
Robinson Seminary, Exeter—h
S. Mary's School, Concord—h
Simond's Free H. S., Warner—h
Stevens H. S., Claremont—h
Walpole—h
Whitefield—h
Wilton—h

NEW JERSEY.

Asbury Park—c s h
Bayonne—c s h
Bloomfield—c s h
Bordentown—s h
Camden—c s
Carlstadt—s
Cliffside Park—c s
Dover—c s h
East Orange—c s h
East Rutherford—s
Elizabeth—c s h
Englewood—c s
Flemington—s
Fort Lee—s
Freehold—h
Glen Ridge—c s h
Hackensack—c s h
Hackettstown—s
Haddonfield—c s h
Hammonton—s
Hoboken—c s h
Jersey City
Long Branch—c s
Millville—c s h
Monroe Township—s
Montclair—c s h
Morristown—s
Morristown Township—c s
New Brunswick—c s h
Newark—c s h
Newton—s
Nutley—c s h
Orange—c s h
Passaic—c s h
Paterson—c s h
Perth Amboy—c s h
Plainfield—c s h
Pleasantville—c s h
Princeton—c s h
Rahway—c s h
Red Bank—c s h
Ridgewood—c s h
Roselle—s
Rutherford—s
Salem—s
Somerville—s h
South Amboy—s h
South Orange—c s h
South River—s h
Tenafly—c s
Trenton—c s h
Vineland—c s
Washington—s
West New York—c s
Westfield—c s h
West Hoboken—s
West Orange—s h
Woodbury—c s h

NEW MEXICO.

Alamagordo
Albuquerque—c s h
Artesia
Belen
Bernalillo
Capitan
Carlsbad
Carrizozo
Cerillos
Clayton—h
Deming—h
Dexter
East Las Vegas—s h
El Rito, Spanish-American normal school
Folsom
Ft. Sumner
Gallup
Hachita
Las Cruces
Las Vegas
Lovington
Magdalena
Nara Visa
Raton
Roswell—c s h
Roy
Santa Fé—c s h
Santa Fé, St. James school
Santa Rosa
Scorro
Silver City—c s h
Springer
Taiban
Tolar
Tucumcari—c s h
Tularosa

NEW YORK.

Addison
Albany—c s h
Amsterdam—c s h
Auburn—c s h
Batavia—c s
Binghamton—c s h
Brockport—s h
Bronxville
Brooklyn—c s h
Buffalo—c s h
Canandaigua—c s h
Canastota—c s h
Canisteo
Carthage—c s h
Castile
Catskill—c s h
Chester
Clyde—s
Corinth
Corning (Dist. No. 9)—s
Cornwall
Cortland—c s h
Dobbs Ferry
Dunkirk—c s h
East Syracuse—s h
Elmira—s h
Elmira Heights—s
Fayetteville
Frankfort
Fredonia—s
Fulton—s h
Geneva—c s h
Glen Cove
Glens Falls—c s h

Gloversville—c s h
Goshen
Gowanda
Granville—c s h
Greenport—s
Hastings upon Hudson.
Haverstraw—s h
Hempstead—s h
Herkimer—c s h
Highland Falls
Homer—c s
Hornell—s h
Hudson—h
Hudson Falls
Hyde Park
Ithaca—c s h
Jamestown—c s h
Johnstown—c s h
Kingston
Lackawanna—s
Lancaster—c s h
Lansingburg
Lawrence
Le Roy—c s h
Little Falls—c s h
Lockport—c
Lowville—c s h
Lyons—s h
Mamaroneck—s h
Medina—c h
Middle Granville
Middletown—c s h
Mohawk
Mount Kisko—s
Mount Vernon
Newark—c s h
Newburgh—c s
New Paltz—h
New Rochelle—c s h
New York—c s h
    Washington Irving H. S.—h
Niagara Falls—c s h
North Tarrytown—c s h
North Tonawanda—c s h
Norwood
Ogdensburg—h
Olean—c s h
Oneida—c s h
Oneonta—c s h
Ossining—h
Owego—c s h
Peekskill—c s h
Penn Yan
Perry—c s h
Phoenix
Plattsburg—c s h
Pleasantville
Port Chester—c s
Poughkeepsie—h
Rensselaer—s
Rhinebeck
Rochester—c s
Rockville Center
Rome—c s
Rye—c s
Salamanca—c s h
Saratoga Springs—c s h
Saugerties—s
Schenectady—c s h
Schoharie
Sea Cliff
Sidney—s
Solvay—c s h
Southampton—c s h
Springville
Syracuse—c s h
Tonawanda—c s h
Troy—c s h
Tuxedo Park
Utica—c s
Walden—s
Walton—c s h
Waterford
Waterloo—c s h
Watertown—c s h
Waverly
Wellsville—c s h
West Carthage
White Plains—s
Yonkers—c s h

NORTH CAROLINA.

Andrews
Asheville—c s h
Aulander (County Farm Life School)—h
Browns Summit
Burlington
Cary (County Farm Life School)—h
Charlotte—c s h
Durham—s h
Edenton
Elizabeth City
Fayetteville
Gastonia
Goldsboro—h
Greensboro
Greenville
Harmony (County Farm Life School)—h
Henderson
Hendersonville
High Point
Holly Springs—h
Jamestown
Kinston
Laurinburg
Lillington (County Farm Life School)—h
Lowes Grove (County Farm Life School)—h
Louisburg
Lumberton
Marion
Monticello (County Farm Life School)—h
Monroe—s h
Murphy
New Bern—c s h
Newton (County Farm Life School)—h
Oxford
Pineville (County Farm Life School)—h
Raleigh—s h
Red Oak (County Farm Life School)—h
Red Springs (County Farm Life School)—
Rocky Mount
Rutherfordton
Salisbury
Scotland Neck
Statesville
Tarboro
Thomasville
Wadesboro
Washington—c s h
Waynesville
Williamston
Wilmington—c h
Wilson
Winston
Taylor (County Farm Life School)—h
Vanceboro (County Farm Life School)—h

NORTH DAKOTA.

Aneta
Bathgate
Beach
Berthold
Bismarck—c s h
Bottineau
Bowbells
Cando—h
Carrington—h
Casselton
Cavalier
Cooperstown—h
Courtenay
Dazey
Devils Lake—c s h
Dickinson
Drayton
Edgerly
Edmore
Enderlin
Fairmont
Fargo—c s h
Fessenden
Finley
Grafton
Grand Forks—c s h
Hankinson
Harvey
Hatten
Hettinger
Hillsboro
Hope

Hunter
Jamestown—c s h
Kensal
Kenmare—h
Lakota
La Moure
Langdon
Lansford
Larimore—h
Leeds
Lidgerwood
Lisbon
Mandan
Marmath
Mayville
Michigan
Minnewaukan
Minot—c s h
Mott
New Rockford
Northwood
Oakes
Pembina
Portal
Rolla
Rugby
St. John
St. Thomas
Stanley
Tower City
Towner
Valley City—c s h
Velva
Wahpeton
Walhalla
Webster
Westhope
Williston—c s h
Willow City

OHIO.

Ashland—h
Adams—h
Akron—h
Ashtabula—c s h
Alliance—h
Athens—s
Barberton—h
Barnesville—s
Bellaire—c s h
Butler—
Bryan—s h
Bucyrus—s
Canton—s
Celina—c s h
Chillicothe—c s h
Cincinnati—c s h
Clark—h
Clermont—h
Cleveland—c s h
Cleveland, Technical H. S.—h
Columbus—c s h
Conneaut—c s h
Cuyahoga—s h
Coshocton—c s h
Dayton—c s h
Defiance—c s
Delaware—h
Delphos—s h
East Cleveland—c s h
Elyria—c s h
Fostoria—c s h
Findley—h
Franklin—h
Fulton—h
Galion—h
Gallipolis—h
Greenville—h
Highland—h
Hamilton—c s h
Hancock—h
Harrison—h
Huron—h
Ironton—c s h
Jackson—h
Jefferson—h
Kent—c h
Keene—h
Knox—h
Lake—c s h
Lakewood—c s
Lancaster—s
Lebanon—s
Logan
Lorain—h
Lima—s h
Lockland—c s h
Lucas—h
Madisonville—h
Mansfield—h
Marion—s
Medina—h
Meigs—h
Mercer—h
Miamisburg—s h
Middletown—h
Mount Vernon—h
Nelsonville—c s h
Newark—c s h
Norwalk—h
Norwood—h
New Philadelphia—c s h
New Lexington—c s
Niles—c s h
Oberlin—c s h
Oxford—h
Painesville—c s
Salem—c s h
Sandusky—c s h
Shelby—c s h
Sidney—c s h
Springfield—s h
Seneca—h
St. Bernard—c s h
Stark—h
Tiffin—c s h
Toledo—c s h
Troy—s h
Union—h
Urbana—s h
Van Wert—c s h
Vinton—h
Wauseon—c s h
West Alexander—h
Williams—h
Wood—h
Wyandot—h
Xenia—c s

OKLAHOMA.

Ada—c s h
Altus—c
Ardmore—c s h
Bartlesville—s h
Blackwell—h
Bristow—h
Chickasha—h
Claremore—h
Clinton—c s h
Dewey—h
Duncan—h
Elreno—s h
Enid—c s h
Frederick—c s h
Granite—h
Guthrie—s h
Hartshorne—h
Holdenville—h
Lawton—h
Lehigh—h
McAlister—s h
Manguin—h
Miami—c
Muskogee—c s h
Norman—h
Nowata—h
Oklahoma—c s h
Pawhuska—c s h
Ramona—h
Sapulpa—c s h
Shawnee—h
Stillwater—h
Tahlequah—h
Tulsa—c
Vinita—c s h
Westville—h

OREGON.

Albany—h
Bandon
Ashland—c s h
Astoria—s h
Baker—c s h
Central Point—h
Clatskanie—h
Corvallis—s h
Cottage Grove—h
Dallas
Drain
Eugene—e h
Falls City
Forest Grove
Fossil
Freewater (Dist. 83, R. F. D., 2)
Glendale
Grant's Pass—c s h
Hillsboro—h
Hood River—h
Independence
Joseph
Klamath Falls—c s h
La Grand—c s h
McMinnville—h
Marshfield—c s h
Medford—h
Newberg
Newport
North Bend—h
Oakland
Ontario
Oregon City—h
Pendleton—s h
Philomath
Phoenix
Portland—c s h
    Jefferson H. S.—h
    Lincoln H. S.—h
    Washington H. S.—h
Princeville, Crook Co. H. S.—h
Redmond
Roseburg
Scio
Springfield
Stanfield
St. Johns
Sutherlen
Salem—s h
Talent
Union—h
The Dalles—c s h
Tillamook
Wallowa
Woodburn

PENNSYLVANIA.

Altoona—s h
Allegheny—h
Ambler—s h
Athens—c s h
Beaver—c s
Bellefonte—s
Bellevue—h
Berwick—s h
Bethlehem—s
Braddock—c s h
Bradford—c s h
Bristol—s h
Butler—s h
Carlisle—h
Carrick—s
Chambersburg—s
Chester—c s h
Clairton—c s h
Clarion—s h
Clearfield—c s h
Conshohocken—s h
Corry—c s h
Donora—c s h
Doylestown—s
Dubois—s h
Easton—c s h
Edgewood—c s h
Emporium—c h
Erie—c s h
Etna—c s h
Freeland—h
Gettysburg—s h
Greensburg—h
Harrisburg—h
Hazleton—c s h
Homestead—c s h
Huntington—h
Johnstown—c s h
Kane—c s h
Kittanning—c s h
Langhorne—h
Lansdale—s
Lansford—s h
Lebanon—c s h
Lewisburg—s
McKeesport—h
Meadville—c s h
Minersville—s
Monessen—c s
Monongahela—c s h
Mount Pleasant—c s h
New Castle—c s
New Kensington—c h
Norristown—s h
Oakmont—c s h
Oil City—h
Philadelphia—c s h
Philadelphia, William Penn H. S.—h
Phoenixville—h
Pittsburgh—c s h
Portage—c s
Rankin—s h
Reading—c s h
Ridgeway—c s
Scottdale—c s h
Scranton—s h
Sewickley—c s h
Shamokin—h
Sharon—c s h
Sharpsburg—c s h
Souderton—h
Spring City—s h
Swarthmore—h
Swissvale—c s h
Tarentum—c s h
Tidionte—h
Titusville—c s h
Turtle Creek—c s h
Tyrone—h
Warren—c s h
Waynesboro—h
Weatherly—s h
West Chester—c s h
Wilkes Barre—s h
Wilkinsburg—c s
Williamsport—c s h
Wilmerding—c s h
York—s

RHODE ISLAND.

Bristol
Central Falls—e
Cranston—s
East Greenwich—h
Newport—e p
Pawtucket—e h
Providence—e h
Providence, Technical H. S.—h
Warwick—e
Westerly—e p
Woonsocket—e

SOUTH CAROLINA.

Anderson—c s h
Antioch—h
Beaufort—e h
Beulah—e
Blue Ridge
Charleston—e h
Charleston (Memminger H. S.)—h
Chester—e
Columbia, H. S.—h
Columbia, Howard H. S.—h
Dillon—h
Florence—h
Floyds—h

Four Holes—e h
Friendship
Greenville—h
Hartsville—e
Hendersonville—h
Kelly—e
Kitching Mill—e
Lancaster—e
Leesville, Delmar Institute—h
Liberty Hill—h
Marion—h
Monaghan—e
Newberry—h
North Augusta—h
Oak Grove—h
Olympia—e
Pacolet Mills—e
Pelzer—e
Piedmont—e
Pleasant Plain—e
Prosperity—h
Richland—e h
Ridgeville
Rock Hill—h
Schultz—h
Shiloh—e
Spartanburg—h
Spring Branch—e
Springfield—h
Summerton—h
Summerville—e
Sumter—h
Sunnyside—e h
Three and Twenty—e
Timmonsville
Union Hill—h
Victor Mills
West Pelzer—h
West Springs—e

SOUTH DAKOTA.[1]

Aberdeen—c s h
Brookings—c s h
Deadwood—s h
Fort Pierre—h
Lead—c s h
Maddison—c s h
Mitchell—s h
Pierre—s h
Redfield—c s h
Sioux Falls—c s h
Vermilion—h
Watertown—c s h

TENNESSEE.

Arlington—h
Athens—h
Barley—h
Benton—h
Bixson—h
Bolivar—h
Brownsville—h
Byington—h
Carthage—h
Chattanooga—c s h
Clarksville—h
Clinton—h
Collierville—h
Columbia—h
Concord—h
Corryton—h
Covington—h
Crossville—h
Dandridge—h
Dayton—h
Ducktown—h
Dunlap—h
Dyersburg—h
Fayetteville—h
Fountain City—h
Greeneville
Henderson—h
Hixson—h
Jasper—h
Jellico—h
Kingston—h
Knoxville—c s h
Lawler (Memphis)—h
Lawrenceburg—h
Lebanon—h
Lenoir City—h
Lewisburg—h
Lexington—h
Liberty—h
Lynchburg—h
Lynnville—h
Madisonville—h
Manchester—h
Memphis—c s h
Mercer—h
Midway—h
Mosheim—h
Mount Pleasant
Murfreesboro—h
Nashville—c s h
Paris—h
Pinson—h
Ripley—s
Sale Creek—h
Sneedville—h
Soddy—h
Somerville—h
South Knoxville—h
Sparta—h
Spencer—h
Sulphur Springs—h
Sweet Water—h
Tazewell—h
Tellico Plains—h
Tyner—h
Union City—c s h
White Haven—h

TEXAS.

Alief—h
Austin—h
Bay City
Beaumont—s h
Belton—h
Bishop—h
Blanco
Bonham—h
Brenham
Bridgeport
Brownwood—s h
Buda
Buna—h
Carrizo Springs—h
Carthage
Chico
Childress—h
Cisco—h
Cleburne—h
Clifton—h
Coleman—h
Comanche—h
Conroe
Cooper
Corsicana—h
Corpus Christi
Cotulla—h
Cuero—h
Dallas—h
Decatur—h
Denison—e
Denton—s h
Eagle Lake
Edgewood—h
El Paso—c s h
Franklin
Ft. Worth—c s h
Gainesville—h
Galveston—c sh
Galveston, Ball H. S.—h
Galveston, Central H. S.—h
Garrison
Gatesville
Greenville—h
Greenwood
Hamilton—h
Harrisburg
Haskell
Hillsboro—c s h
Honey Grove

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[1] List is incomplete; all first-class high schools and many others are reported to have instruction.

Houston—c s h
Houston Heights—c s h
Huntsville—h
Iola—h
Jacksboro
Jacksonville—c s h
Jefferson High School—h
Jefferson High School (negro)—h
Jourdanton
Kerrville
Kingsville—h
Kyle
Longview
Lufkin
Madisonville
Marlin—h
Marshall High School—h
Marshall Central H. S.—h
McGregor—h
McKinney
Mineola—h
Moore
Nachogdoches—h
Navasota—h
Ozona
New Braunfals—c s h
Palestine—c s h
Paris High School—h
Paris Giboons H. S.—h
Pilot Point—h
Pittsburg—h
Poolville—h
Port Arthur—c s h
Rhome—h
San Angelo
San Antonio—c s h
San Antonio, Alamo Heights H. S.—h
San Antonio, Morrill H. S.—h
San Marcos—h
Sherman—s h
Silverton
Stamford—h
Sulphur Springs
Swan
Sweetwater—c s h
Teague—c s h
Temple
Terrell—h
Texarkana—c s h
Tuleta
Uvalde—h
Van Alstyne—h
Waco High School—h
Waco, Moore H. S.—h
Waxahachie—h
Wichita Falls—s h
Winnsboro

UTAH.

American Fork—h
Beaver—h
Brigham City—h
Castledale—h
Cedar City
Ephraim—h
Ephraim, Snow Academy—h
Farmington—h
Granite District
Heber—h
Hyrum—h
Jordan District
Kamsas
Lehi—h
Lewiston
Logan
Logan, New Jersey Academy—h
Logan, Brigham Young College—h
Manti—h
Moab—h
Monroe—h
Morgan—h
Moroni—h
Mount Pleasant—h
Murray—c s h
Nephi—h
Ogden—c s h
Ogden, Weber Stake Academy—h
Panguitch—h
Park City—h
Payson—c s h
Pleasant Grove—h
Price—h
Provo—c s h
Provo, Brigham Young University
Richfield—h
Richmond—h
Roosevelt—h
Salina—h
Salt Lake City—c h s
Salt Lake City (Normal School)
Salt Lake City, Latter Day Saints University
Sandy—h
Spanish Fork—h
Springville—h
St. George
Woods Cross—h

VERMONT.

Bellows Falls—h
Bennington—s h
Brattleboro—e
Bristol—h
Burlington—c s h
Essex Junction—h
Montpelier—c s h
Morrisville—h
Rutland—s h
St. Albans—e
St. Johnsbury—c s
Saxtons River—h
Springfield—h

VIRGINIA.

Alexandria—s
Appomattox, Agr. H. S.—h
Burkeville, Agr. H. S.—h
Chester, Agr. H. S.—h
Covington—s
Danville—c s h
Drivers, Agr. H. S.—h
Elk Creek, Training School—h
Forest Depot, New London Academy—h
Hampton, Agr. H. S.—h
Harrisonburg—c s h
Luray—h
Lynchburg—c s h
Manassas, Agr. H. S.—h
Middleton, Agr. H. S.—h
Newporr News—s h
Norfolk—h
Petersburg—c s h
Portsmouth—c s h
Radford—c s
Richmond—c s h
Richmond, Armstrong H. S.—h
Richmond, Marshall H. S.—h
Roanoke—h
Staunton—s h
Suffolk—h
Wakefield—h
Waverly—h
Williamsburg—c s h

WASHINGTON.

Aberdeen—c s h
Amber—h
Anacortes—c s h
Arlington—h
Auburn—h
Bellevue—h
Bellingham—c s h
Bellingham, Fair Haven H. S.—h
Bellingham, Whatcom H. S.—h
Black Diamond (Union H. S.)—h
Blaine—h
Bremerton and Charleston (Union H. S.)—h
Buckley—h
Burlington—h
Castle Rock—h
Centralia—c s h
Chehalis—s h
Cheney—h
Cherry Valley—h
Chewelah (Union H. S.)—h
Cle Elum—c s h
Colfax—c s h
Colville—h
Connell—h
Davenport—h

Dayton—h
Doty—h
Dryad—h
Eatonville—h
Edwall—h
Ellensburg—c s h
Elma—h
Enumclaw (Union H. S.)—h
Everett—h
Fairfield—h
Fall City—h
Farmington—h
Finley—h
Five Mile Prairie—h
Foster—h
Friday Harbor—h
Garfield—h
Goldendale—h
Granite Falls—h
Greenacres—h
Grier—h
Harrington—h
Hartline—h
Hillyard—c s h
Hoquiam—c s h
Irondale-Hadlock—h
Kalama—h
Kelso—h
Kennewick—h
Kent—h
Kiona-Benton—h
Kirkland (Union H. S.)—h
Kittitas (Union H. S.)—h.
Krupp—h
La Conner—h
Latah—h
Leavenworth—h
Lind—h
Lynden—h
Mabton—h
Malden—h
Marysville—h
Mead—h
Meadow Lake—h
Monroe (Union H. S.)—h
Mossy Rock—h
Mount Vernon—h
North Yakima—c s h
Oakville—h
Odessa—h
Olympia—h
Orting—h
Palouse—h
Pasco—h
Pe Ell—h
Pomeroy—h
Port Townsend—c s h
Prescott—h
Prosser—h
Pullman—h
Puyallup—c s h
Quincy—h
Raymond—h
Reardan—h
Redmond—h
Renton—s h
Ritzville—h
Rosalia—h
Roslyn—c s h
Seattle—c s h
Seattle (Ballard H. S.)—h
Seattle (Broadway H. S.)—h
Seattle (Franklin H. S.)—h
Seattle (Lincoln H. S.)—h
Seattle (Queen Anne H. S.)—h
Seattle (West Seattle H. S.)—h
Sedro Woolley (Union H. S.)—h
Selah—h
Sequim—h
Shelton—h
Snohomish—c s h
South Bend—c s h
Spokane—c s h
Spokane (Lewis and Clark H. S.)—h
Spokane (North Central H. S.)—h
Sprague—h
Stanwood—h
Stevenson—h
Sultan (Union H. S.)—h
Sumner—h
Tacoma—c s h
Tacoma (Barlow Annex H. S.)—h
Tacoma (Stadium H. S.)—h
Tekoa—h
Thornton—h
Toppenish—h
Touchet—h
Vader—h
Vancouver—c s h
Vera (P. O., Greenacres)—h
Waitsburg—h
Walla Walla—h
Wapato—h
Wenatchee—h
Wendell Phillips (P. O., Mabton, R. 1.)—h
White Salmon—h
Wide Hollow—h
Wilbur—h
Wilson Creek—h
Winlock—h
Woodland—h
Zillah—h

WEST VIRGINIA.

Bluefield—c h
Cameron—h
Charleston—h
Chester—h
Clarksburg—h
Davis—c h
Elkins—h
Fairmont—s h
Grafton—h
Hinton—c h
Huntington—c h
Keyser—c s h
Mannington—c s h
Middlebourne—h
Moundsville—s
Richmond—c s h
Thomas—h
Wheeling—c s h
Wellsburg—h
Williamson—c s h

WISCONSIN.

Algoma—c s h
Antigo—h
Appleton—c s h
Arena—h
Ashland—c s h
Augusta—h
Bangor—h
Baraboo—c s h
Bayfield—h
Beaver Dam—c s h
Beloit—c s h
Berlin—s h
Bethel—h
Black River Falls—h
Boscobel—h
Brodhead—h
Burlington—c s h
Chilton—h
Chippewa Falls—h
Clinton—h
Clintonville—h
Colfax—h
Columbus—c s h
Cudahy—h
De Forest—h
Delavan—h
De Pere—c s h
Durand—h
Eau Claire—c s h
Edgerton—c s h
Evansville—h
Fennimore—h
Fond du Lac—c h
Fort Atkinson—c s h
Galesville—h
Gilmanton—h
Glenwood—h
Grafton—h
Grand Rapids—h
Green Bay (east side)—h
Green Lake—h
Hayward—h

Independence—h
Iron Belt—h
Janesville—c s h
Jefferson—s h
Kaukauna—cs h
Kenosha—c s h
Kiel—h
Lacrosse—c s h
Ladysmith—h
Lake Geneva—c s h
Lancaster—h
Madison—c s h
Manitowoc—c s h
Marinette—c s h
Markesan—h
Marshall—h
Marshfield—c s h
Mayville—h
Mellen—h
Menasha—c s h
Menomonee—c s h
Menomonee, County School of Agr. and Dom. Econ.—h
Merrill—h
Merrillan—h
Milwaukee—c s h
Milwaukee, Bay View H. S.—h
    Washington H. S.—h
    West Div. H. S.—h
Mineral Point—c s h
Mondovi—h
Monroe—s h
Montello—h
Montfort—h
Mount Horeb—h
Muscoda—h
Neenah—c s h
Neillsville—h
New Holstein—h
New London—c s h
New Richmond—h
Oconomowoc—h
Oconto—c s h
Omro—c s h
Onalaska, County School of Agr. and Dom. Econ.—h
Oshkosh—c s h
Palmyra—h
Park Falls—h
Pewaukee—h
Phillips—h
Plainfield—h
Platteville—c s h
Portage—h
Port Washington—c s h
Poynette—h
Racine—h
Randolph—h
Reedsburg—sh
Rhinelander—c s h
Rice Lake—c s h
Richland Center—c s h
Rio—h
Ripon—h
River Falls—h
Roberts—h
Rochester, County School of Agr. and Dom. Econ.—h
Sauk City—h
Sharon—h
Shawano—h
Sheboygan—c s h
Shiocton—h
Soldiers Grove—h
South Milwaukee—c s h
Sparta—c s h
Spooner—h
Spring Lake—h
Stanley—c s h
Stevens Point—c s h
Stoughton—c s h
Sturgeon Bay—c s h
Sun Prairie—h
Superior—c s h
Thorp—h
Tomah—c s h
Tomahawk—s h
Tripoli—h
Two Rivers—c s h
Verona—h
Viola—h
Viroqua—h
Wabeno—h
Walworth—h
Washburn—h
Watertown—h
Waukesha—c s h
Waupaca—c s h
Waupun—h
Wausau—c s h
Wausau, County School of Agr. and Dom. Econ.—h
Wausaukee—h
Wautoma—h
Wauwatosa—c s h
Wauwatosa, County School of Agr. and Dom. Econ.—h
West Allis—c s h
West Bend—h
West De Pere—h
West Salem—h
Weyauwega—h
Whitewater—c s h
Wilton—h
Winneconne, County School of Agr. and Dom. Econ.—h
Zanesville—c s h

WYOMING.

Evanston—s h
Laramie—c s h
Sheridan—c s h

Additional schools received too late for inclusion on page 44.

CONNECTICUT.

Ansonia—s h
Avon—s
Bethany—s
Bridgeport—c s h
Bristol—c s
Cheshire—s
Coventry—s
Danbury—c s
Darien—c s
Derby—s
Durham—s
Enfield—s
Farmington—c s
Greenwich—s h
Hartford—c s h
Huntington—s
Kent—s
Killingworth—s
Lebanon—s
Lisbon—s
Manchester—c s
Manchester (south district)—c s h
Meriden—s h
Middlebury—s
Middletown (city district)—c s h
Montville—c s
Naugatuck—c s h
New Britain—c s
New Haven—c s h
North Haven—s
North Branford—s
North Stonington—h
Norwalk—s h
Norwich—c
Orange—s
Pomfret—s
Portland—s
Putnam—c s h
Redding—s
Rocky Hill—s
Salisbury—c s
Seymour—s
Sharon—s
Sherman—s
Southington—s
South Windsor—s
Sprague—s
Stamford—c s h
Sterling—s
Suffield—s
Thomaston—s
Vernon—s
Voluntown—s
Washington—s h
Waterbury—c s
Westport—h
Winchester—h

GIRARD COLLEGE, MAIN BUILDING.

UNITED STATES BUREAU OF EDUCATION
BULLETIN, 1914, NO. 40 - - - - - - - WHOLE NUMBER 614

CARE OF THE HEALTH OF BOYS IN GIRARD COLLEGE PHILADELPHIA, PA.

DEPARTMENT OF THE INTERIOR

WASHINGTON
GOVERNMENT PRINTING OFFICE
1914

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LETTER OF TRANSMITTAL.

Department of the Interior,
Bureau of Education,
Washington, December 18, 1913.

Sir: On a recent visit to Girard College, Philadelphia, I was so impressed with the evident good health of the boys in that institution and with the attention and care given to this important phase of the institution's work that I requested Dr. Cheesman A. Herrick, president of the college, to have prepared for this bureau some account of the health work of the college. President Herrick has very kindly complied with my request and has forwarded the manuscript transmitted herewith. I recommend that it be published as a bulletin of the Bureau of Education for distribution among the officers of orphanages, home schools, so-called industrial and reform schools, schools for the feeble-minded, State schools for the deaf and the blind, and other institutions in which children are detained and on which they depend for the care of physical health as well as for education. The importance of the proper care of the health of children in such institutions is indicated by the fact that reports to this office show not less than 90,000 inmates in institutions of this kind in the United States.

Respectfully submitted.

P. P. Claxton,
Commissioner.

The Secretary of the Interior.

CARE OF THE HEALTH OF BOYS IN GIRARD COLLEGE, PHILADELPHIA, PA.

I. GIRARD COLLEGE.

By Frank O. Zesinger.

Girard College was founded and endowed by Stephen Girard, mariner and merchant, a native of France, who came to Philadelphia in 1776. After a long life of service to his adopted city, State, and country, he died in 1831, leaving the bulk of his estate in trust to the city of Philadelphia for the erection and maintenance of what is now known as Girard College.

The following extract from his will clearly expresses his purpose:

> and whereas I have been for a long time impressed with the importance of educating the poor and of placing them by the early cultivation of their minds and the development of their moral principles above the many temptations to which through poverty and ignorance they are exposed; and I am particularly desirous to provide for such a number of poor male white orphan children as can be trained in one institution a better education, as well as a more comfortable maintenance than they usually receive from the application of public funds.

The bequest for the erection of the college was $2,000,000, and the endowment for its maintenance amounted to about $3,500,000.

Girard College was formally opened in 1848 with 100 pupils. Since its founding it has sent out into the world nearly 8,000 boys.

The college is located in the northwestern section of the city and covers a tract of about 40 acres. There are 14 large buildings. The present attendance at the institution is 1,500.

Boys are admitted to the college between the ages of 6 and 10 and are maintained and educated until they are prepared to leave between the ages of 14 and 18. The course of study as prescribed covers 11 years.

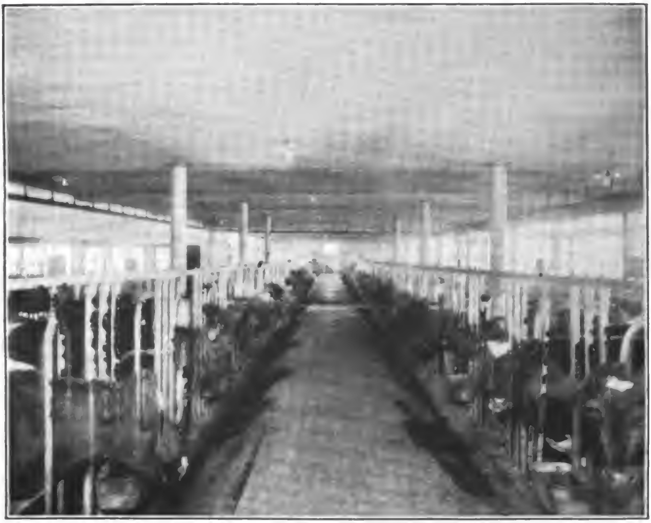
The management of Girard College is vested in the board of directors of city trusts, composed of 15 members, 12 of whom are appointed by the judges of the court of common pleas of the county of Philadelphia, and three ex officio members, the mayor and the presidents of the select and common councils.

The following outline shows the plan of organization of Girard College and the emphasis placed on the health and welfare side:

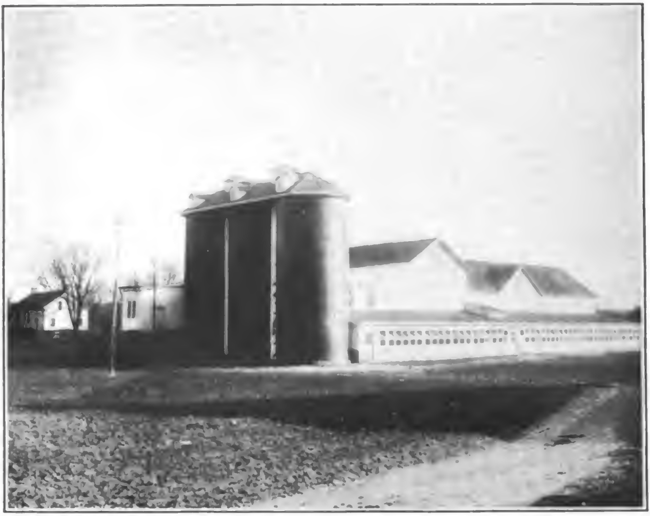
PLAN OF ORGANIZATION.

PRESIDENT
- SECRETARY TO PRESIDENT.
  - Postal clerk, 1.
  - Stenographer, 1.
  - Clerk, 1.
- INSTRUCTION AND LIBRARY (vice president).
  - High school.
    - Professors, 8.
    - Teachers, 6.
    - Assistant, 1.
  - Mech. instruction.
    - Supt. mech. school, 1.
    - Teachers, 12.
  - Prof. mil. science and tactics.
    - Band instructors, 2.
    - Attendant, 1.
  - Librarian.
  - Superv. principal elem. schools.
    - Clerk, 1.
    - Grammar school—teachers, 16.
    - Primary school—teachers, 16.
    - Associate supervisors and relieving teachers, 2.
    - Teacher of special class, 1.
    - Teachers of special subjects, 2.
    - Teachers of vocal music, etc., 2.
    - Teachers of sloyd, 2.
- HOUSEHOLD AND PLAYGROUND (supervising prefect).
  - Prefects, 11.
  - Relieving prefects, 7.
  - Governesses, 22.
- DOMESTIC (matron, dietitian, and assistant matron).
  - Matron's assistants, 2.
  - Housekeepers, 2.
  - Ass't housekeeper, 1.
    - Cooks, 12.
    - Kitchen assistants, etc., 14.
  - Head waitress; waitresses and relieving girls, 41.
  - Utility men, 3.
  - Cleaners and caretakers, 63.
  - Seamstresses, 31.
- BUSINESS (steward and assistant steward).
  - Clerks, 3.
  - Chief engineer.
    - Assistant engineer, 1.
    - Night engineer, 1.
    - Engineers at power house, 2.
    - Lineman and trimmer, 2.
    - Firemen, 9.
    - Steam fitters, 2.
    - Plumber, 1.
    - Utility man, 1.
  - Head carpenter.
    - Carpenters, 3.
    - Bricklayer, 1.
    - Tinsmith, 1.
    - Painter, 1.
    - Laborer, 1.
  - Head gardener; gardeners, 8.
  - Chief baker; bakers, 2.
  - Supt. shoe shop; shoemakers, 7.
  - Foreman of laundry.
    - Assistants, 2.
    - Laundresses, 36.
    - Delivery man, 1.
    - Washermen, 2.
  - Coachmen, 2.
  - Watchmen, 2.
  - Gatemen, 4.
  - Utility men, 2.
- HEALTH (visiting physician).
  - Resident physician.
    - Head nurse.
      - Nurses, 5.
      - Cook, 1.
      - Waitresses, 2.
      - Housemaids, 6.
    - Prefect, 1.
    - Seamstress, 1.
  - Opthalmologist, 1.
  - Chief of ear, nose, and throat department, 1.
  - Chief of dental dept.
    - Dentists, 2.
    - Clerk, 1.
  - Consulting surgeon, 1.
- SUPT. ADMISSION AND DISCHARGE AND ASSISTANT AND 1 CLERK.

The health of the pupils has always been one of the chief concerns of the management, in accordance with the will of the founder, which declares: "Due regard shall be paid to their health, and to this end their persons and clothes should be kept clean."



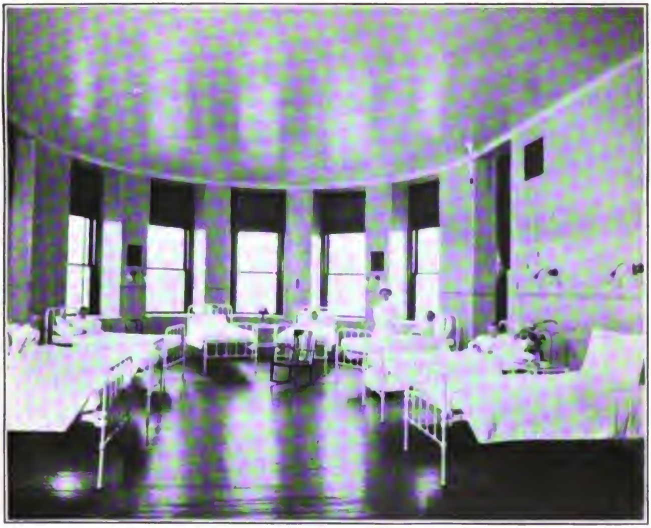
A. STABLE OF DAIRY FROM WHICH THE MILK SUPPLY OF GIRARD COLLEGE IS OBTAINED.



B. COW BARN AT DAIRY FROM WHICH THE MILK SUPPLY OF GIRARD COLLEGE IS OBTAINED.

A. A LAVATORY IN BUILDING NO. 7.

B. LAUNDRY, SECOND FLOOR.



A. A WARD IN GIRARD COLLEGE INFIRMARY.

B. EAR, NOSE, AND THROAT DEPARTMENT OF THE INFIRMARY.

A. OPERATING ROOM IN THE DENTAL DEPARTMENT.

B. WAITING ROOM, DENTAL DEPARTMENT.

The following table shows the death rate of the pupils of the college by decades for the early period, and by years more recently:

	Per thousand.
1848–1857	7.5
1858–1867	5.1
1868–1877	3.1
1878–1887	4.2
1888–1897	4.1
1898–1907	2.8
1908	2.0
1909	2.0
1910	2.0
1911 (there were no deaths).	
1912	2.0
1913	2.0

Before presenting the detailed statements of the visiting physician, the chief of the dental department, the chief of the nose, throat, and ear department and the ophthalmologist, a brief review of some of the health protective measures in practice may be of interest and value.

Diet.—The will of the founder requires that the pupils "shall be fed with plain but wholesome food." The supervision of the diet is in charge of a trained dietitian. The diet lists are supervised by the visiting physician and his staff, who make any suggestions as to change that they may deem wise and beneficial.

Water.—In the year 1893 the board of directors installed a filtering plant of 500,000 gallons capacity. Bacteriological examinations of the water are made periodically to insure safety at all times.

Milk.—The milk supply is carefully guarded. Over 1,300 quarts are delivered to the college daily, from a dairy farm about 30 miles from the city. Under the terms of the specifications and the contract, the college authorities are enabled to keep constant supervision over the product. The cows are inspected by an authorized State veterinarian, and the stables [1] in which the cows are kept are of the most approved type. The men employed about the dairy in handling the milk are examined by the college staff of physicians, and the milk is carefully protected against possible sources of contamination from the time it leaves the cow until it is deposited in the refrigerators at the college. To insure compliance with the specifications, bacteriological examinations are made of at least three samples each month.

Personal cleanliness.—The pupils are required to take frequent baths, and also to visit the lavatories before going to meals and before retiring at night. Bath tubs, except for the very youngest boys, have been abandoned, and shower baths are installed in the various buildings. The lavatories are of the best type of white porcelain,[2] and each boy has his own basin with a supply of towels, wash cloths, soap, tooth powder, tooth brush, hair brush, and comb marked with his name. The tooth brushes in use are made especially for Girard College after a design suggested by the dentist in chief. There are 344 shower baths and 1,276 lavatories; 56 porcelain enameled bath tubs and 320 basins are provided for the smaller boys.

---

[1] Plate 2.

[2] Plate 3A.

Play and playgrounds.—Gymnastic apparatus, tennis courts, swings, see-saws, and other equipment are provided on the playgrounds. During the recess periods the games of the younger boys are carefully arranged and participated in by the teachers in charge. Under the supervision of an instructor in physical training, the boys are systematically taught indoor gymnastics and exercises and outdoor games and sports. An outdoor swimming pond is in use daily during the summer months. In the winter months it is used for skating.

The following statement of the supervising prefect, who is in charge of the playgrounds, indicates the policy of the institution:

> In regard to the playground activities in their relation to the health of the college, it is to be noted that the institution has so arranged the time on the playground that the boys spend as much time in the open air as they do in the schoolroom each week. A sufficient asphalt surface has been placed on our playgrounds so that even in rainy weather it is possible for the boys to be out of doors unless it rains very hard. It has been our policy to place apparatus on our playgrounds so that as many boys as possible may play the game which is peculiar to each season of the year. It has also been arranged for 350 of the boys on one playground to be tested each spring, so that each boy makes a record as to his physical ability in this line. In baseball we have had through the spring season as many as 28 teams in addition to the teams which play with outside organizations. It is our endeavor to reach as an ideal a point where every boy will have the desire and the opportunity to play those games which are familiar to the average American boy.

Ventilation.—Each officer or teacher in charge of a group of boys is made responsible for the ventilation and temperature of the rooms of which he has charge.

Illumination.—Much attention has been given to the subject of proper illumination and many improvements have been made in the lighting equipment of several of the buildings by the installation of indirect or reflected lights.

Plumbing.—All plumbing appliances are inspected at least once each year and no insanitary fixtures are permitted to remain.

The laundry[1] is equipped with modern machinery. A separate department is provided for the laundering of all clothing and bedding sent from the infirmary.

The bakery has been completely rebuilt and is now a model one. The walls of the oven and bread room on the first floor are tiled from floor to ceiling with 3 by 9 inch white glazed tiles. The equipment consists of a flour sifter, flour storage bin, water tank and flour hopper, with scales, dough mixer, dough divider, loaf moulding machine, cake cutting machine, roll divider, proof room, and two ovens of white enameled brick. After the bread is baked, it is kept at an even temperature by means of double window sashes. This equipment provides facilities for supplying a variety in bread and cakes, a very important factor in the diet of the pupils.

---

[1] Plate 3B.

In his annual report to the board of directors, for the year 1910, the president of the college says:

> As medicine is generally tending more and more to the prevention of diseases rather than to their cure, our own work is developing largely in the same direction. Our medical staff has sought during the past year, and I believe will, to an increasing degree in the future, seek to make the medical department of Girard College a department of health and not one of caring for the sick. In this direction it can be of the largest service to the boys who are committed to the care of the college.

This is now the established policy of Girard College, and a brief description of the various agencies for the care of the health of the boys and the statements of the physicians which follow will indicate what is done at Girard College in this most important matter.

II. STATEMENT OF THE VISITING PHYSICIAN.

Examinations of applicants for admission to Girard College are held twice a year and at each examination approximately 100 boys are admitted. By a provision in the will of Mr. Girard the college is accessible to "poor, white, male orphans" between the ages of 6 and 10 years. Under these conditions it can scarcely be expected that all of the applicants will have the inheritance of robust health, and as a matter of fact quite a large percentage of the deaths of parents are attributable to tubercular disease.

Boys born in the old city of Philadelphia, or in Pennsylvania at least, have preference in the matter of admission. This territory furnishes a sufficient number of applicants to keep the total number of pupils in the college at about 1,500. Problems involving the health of the college are very closely allied therefore to the general health conditions as found in the State of Pennsylvania.

Each applicant for admission undergoes a careful physical examination to determine the exact condition of the different organs and functionings of the body and whether or not he is suffering from any communicable disease. In determining the acceptability of an applicant, the rather broad view is taken that unless he has some physical defect or deformity that is likely to interfere seriously with his progress in school he shall be admitted. Experience has shown that the healthful plan of life outlined for the Girard College boy, including as it does good food, healthful outdoor exercise, watchful care, warm clothing, sanitary surroundings, and perfectly ventilated sleeping quarters, increases his resistance to disease and enables him to secure an education that could not be obtained without such advantages as the college affords. A careful inquiry is made into the family history of each boy, and although there may be a very positive tubercular or specific inheritance, the applicant is not refused admission unless there is evidence that such disease is in active progress.

As a matter of routine, every boy is vaccinated as soon as he enters the college. Our percentage of "takes" is comparatively small, most of the boys showing marks indicating a very recent vaccination. The Pennsylvania law regarding vaccination is particularly insistent on all children entering school being successfully vaccinated. Practically all boys applying for admission to Girard College have been to school, and therefore have been vaccinated.

No case of typhoid fever is known to have developed in Girard College for more than three years. With the knowledge that this disease is preeminently water or milk borne, we are particularly watchful of these two sources of infection. The water supply of the college is obtained from the regular city mains. The college has its own filter; and this means that the drinking water is twice filtered. The water is submitted each month to a chemical and bacteriological examination to insure its freedom from sewage contamination and as far as possible from infectious intestinal bacilli. We have reason to suppose, therefore, that more than ordinary protection is furnished against this fruitful source of infection.

From 800 to 1,000 of the pupils of the college go to the country during the vacation period of July and August, and we have an occasional case of post-vacation typhoid. During the past summer, and for two years previous, epidemics of typhoid fever have prevailed in towns within a radius of 100 miles of Philadelphia. Unfortunately it is this very territory into which most of the pupils go on their vacation.

Experience seems to prove that the general health of the boy can best be conserved in the college during the summer months, as well as at other times. Parallel reasons make it necessary for him to have the relaxation which change of routine and environment brings. Under the rules now governing applications for vacation time, the mother is required to secure a certificate from a reputable physician testifying to the safe sanitary conditions of the place where she proposes taking her boy. This is the best that can be done by the college at long range. It is impossible even with this guarantee to know positively what the home surroundings of any boy are without a visit from our field agent. During each one of the three past years we have had two cases of post-vacation typhoid, making a total of six cases. As a protection against all possible sources of infection by the *Bacillus typhosus* it has been suggested that all of the pupils of the college, or at least those going into districts suspected of being insanitary, be inoculated with antityphoid serum. Such a plan is now under consideration.

Not within recent years have we had an epidemic the source of which could be traced to causes arising within the college. The sleeping quarters are roomy, with an abundance of air space, and the bathing and toilet facilities represent the highest type of sanitary plumbing. The food supply is carefully planned and supervised, the object being to furnish an abundance of proper nourishment for a healthy, vigorous, growing boy.

We have occasionally outbreaks of communicable diseases, such as measles, mumps, scarlet fever, diphtheria, and whooping cough. These diseases are usually brought to us from sources outside of the college by pupils going out for Saturday or other holidays and remaining in the city. These epidemics generally occur in cycles, and we have frequently gone for several years without any form of communicable disease except measles. Almost every year, however, we have an epidemic of measles. The usual methods of prompt isolation of infected cases, careful search for possible "carriers," quarantining of "contact" cases, culturing in diphtheria "contacts," have served to stamp out promptly the usual forms of communicable disease. Measles apparently stands in a class by itself as regards difficulty of control. It is probably the most highly contagious of all forms of communicable disease and is particularly so during the early or "catarrhal" stage, probably several days before a rash appears. We find that it usually runs its course in the college in spite of our most strenuous efforts to control it.

The year 1912 may be regarded as an average one in considering the health of the college. For the whole year the daily average number of patients in the infirmary was 35, or about 2⅓ per cent of a total of 1,500 pupils. The highest percentage attained was in March, when it reached 3.8 per cent. The total number of pupils housed in the infirmary during the year included 250 "observation" cases and many of simple headache and minor digestive disturbances. The average Girard College boy is not given to complaining, and experience has shown that it is wise to take cognizance of his most trifling ills and keep him under observation for 24 hours. While this plan increases largely the number of cases "treated," it has the advantage of giving a lad about to be seriously ill the benefit of early rest in bed, careful nursing, control of diet, and observation of important developments in his case.

The infirmary (Pl. 4) is a large 3-story L-shaped building used exclusively for the care of pupils who are ill and for housing the various special divisions of the medical department. The medical staff consists of a visiting physician, resident physician, laryngologist, ophthalmologist, consulting surgeon, chief dental surgeon, and two assistants. In the infirmary there are available about 50 beds for ordinary use and 130 beds for any unusual outbreak or epidemic. The second floor of the infirmary is the one in general use, the first floor being taken up with offices, clinic rooms, drug, and schoolroom. The third floor is used for the isolation of communicable diseases. When this floor is in use, it is practically isolated from other parts of the infirmary, and special nurses are engaged for the care of pupils ill here. The regular staff of nurses in the infirmary consists of four day nurses, including a head nurse, and two night nurses, with an occasional extra nurse engaged in times of great stress.

On the second floor of the building are thoroughly equipped operating and sterilizing rooms; all necessary operations are performed by the consulting surgeon, who is regularly on the medical staff of the infirmary.

III. STATEMENT OF THE CHIEF OF NOSE, THROAT, AND EAR DEPARTMENT.

The answer to the query, How is the health of the boys at Girard College conserved? is a very simple one so far as it pertains to the ear, nose, and throat. It is largely a question of prophylaxis.

We aim to keep these special organs in as near a normal condition as possible. Upon entering the college each boy is submitted to a physical examination of the ear, nose, and throat, and the result of this examination is kept on file.

The first fruits of this examination are that a large proportion of the applicants (from 33 to 50 per cent) are placed aside for some form of treatment either operative or local. The various catarrhal and suppurative inflammations of the ear, the multiple catarrhal conditions of the nose and naso-pharynx, and the very large number of cases in children of this age (6 to 8 years) of pathologic conditions of the adenoid tissue at the vault of the pharynx, and of the tonsils, are in the list of those separated from the normal, or rather near normal.

All of these conditions are remedied as far as possible immediately upon entrance. The Girard College boy, therefore, starts with a clean bill of health, so that with proper sanitary regulations as to the schoolrooms, sleeping rooms, etc., careful regulations as to the work and play, and all other necessary precautions which the environment of the boy suggests and which the authorities of the college are diligent to employ, it is a comparatively simple matter to maintain good health.

It has been borne out by experience that these measures reduce to a minimum the amount of sickness as it affects the ear, nose, and throat of the boy at Girard College.

IV. STATEMENT OF THE OPHTHALMOLOGIST.

Upon admission every boy is given an examination by the eye department and a record of the result is kept in a card-index system. The examination covers the following:

Name and age..
Vision......(Each eye taken separately at 5 or 6 meters.)
Eyeball:
  External examination—
    Lids and conjunctiva......(Condition noted.)
    Lachrymal apparatus......(Condition noted.)
    Motility..................(Condition noted.)
    Cornea....................(Condition noted.)
    Iris......................(Condition noted as to response to light and distance.)
  Ophthalmological examination—
    Media....................(Condition noted.)
    Fundus...................(Condition noted, and a reading of its appearance recorded.)
  Symptoms......(Recorded, if there are any.)
  Treatment—
    (Instituted, if required.) Under this head all the boys divide into the three following classes:
    No treatment......These cases are not seen again before the periodic examination, unless they complain or are sent for consultation.
    Observation.......These cases are those which show something out of the normal and are seen again as often as it is deemed necessary.
    Refraction........All refraction is done under mydriasis. The mydriatic used in every case is atropine sulphate, 4 grains to fluid ounce 1. One drop three times a day for six instillations. Upon reexamination many of these cases are done under homatropine.

In refraction cases glasses are generally ordered under the following rules:

Hyperopia......If total less than 2 dioptres, no glasses ordered unless there are symptoms.
  If total over 2 dioptres, glasses generally ordered.
Myopia......Glasses always ordered.
Hyperopic astigmatism......If more than 0.50 dioptre, it is corrected.
  If less than 0.50, it is not corrected unless there are symptoms.
Myopic astigmatism......Glasses ordered for all cases.
Mixed astigmatism.......Glasses always ordered.
Anisometropia...........Generally corrected.

In myopia, full correction is generally ordered. In hyperopia, care is taken to give full play to the physiological function of accommodation.

After a boy gets his glasses he is placed in one of two classes—those who must wear their glasses constantly or those who are only required to use them when doing close work. In order to control this, lists of boys are sent to the respective school or household officers.

Boys who do not come regularly under the observation of the eye department are referred to it by the school or household officers whenever it appears to be necessary. The careful supervision of these officers reaches promptly and effectively any boys requiring treatment.

At regular intervals the vision of all the boys is taken, and those who show any defect are placed under appropriate treatment.

V. THE DENTAL DEPARTMENT.

Realizing the importance of the care of the teeth as a factor in the conservation of normal development and the health of the boys, and with the knowledge that a large percentage of disease and lack of mental and physical development are due to deleterious effects resulting from neglect and improper treatment of diseased conditions and malocclusion of the teeth, the board of directors of Girard College reorganized the department of dental surgery, which was formally opened on September 11, 1911. It is composed of three operating rooms, a waiting room, and a dental laboratory.[1]

The whole equipment in this department was selected and installed with the greatest care. The fitting out of what is one of the most elaborate dental departments to be found in any institution or school of this kind in the world has for its sole object and aim the care of the boys in Girard College and the practice of dentistry for them as an exact science. An elaborate equipment of this character has been considered unnecessary in most institution and school work; in fact, the care of children's teeth, particularly the temporary teeth, has been, as a rule, neglected by both parent and dentist.

With the enormous task of caring for and establishing a healthy condition in the mouths of approximately 1,500 boys, the necessity for having every facility at hand for rapid, thorough, and careful work is quite obvious. The white marble partitions, white enameled steel cabinets with porcelain tops, white enameled chairs, engines, and switchboards were selected to create an impression of cleanliness and refinement which we desire the boys of Girard College to have of their dental department. On leaving college the boys will then seek to have their teeth cared for in an office where a carefully selected equipment is available and where a high standard is maintained. These are usually found in the offices of the most progressive men, who realize that in their adoption they are enabled to advance their work to its highest degree of perfection.

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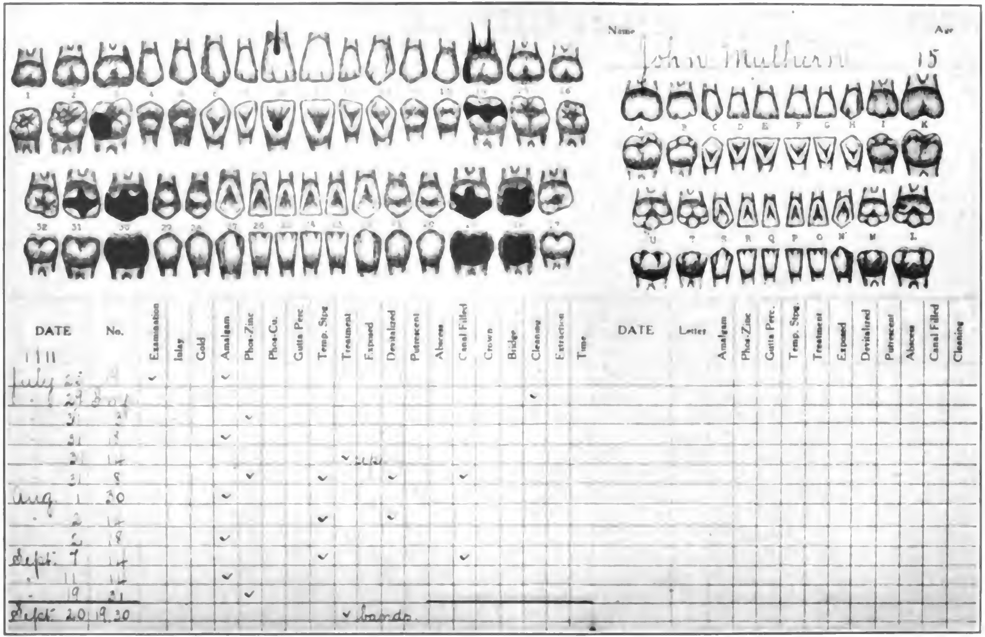
[1] Plate 5.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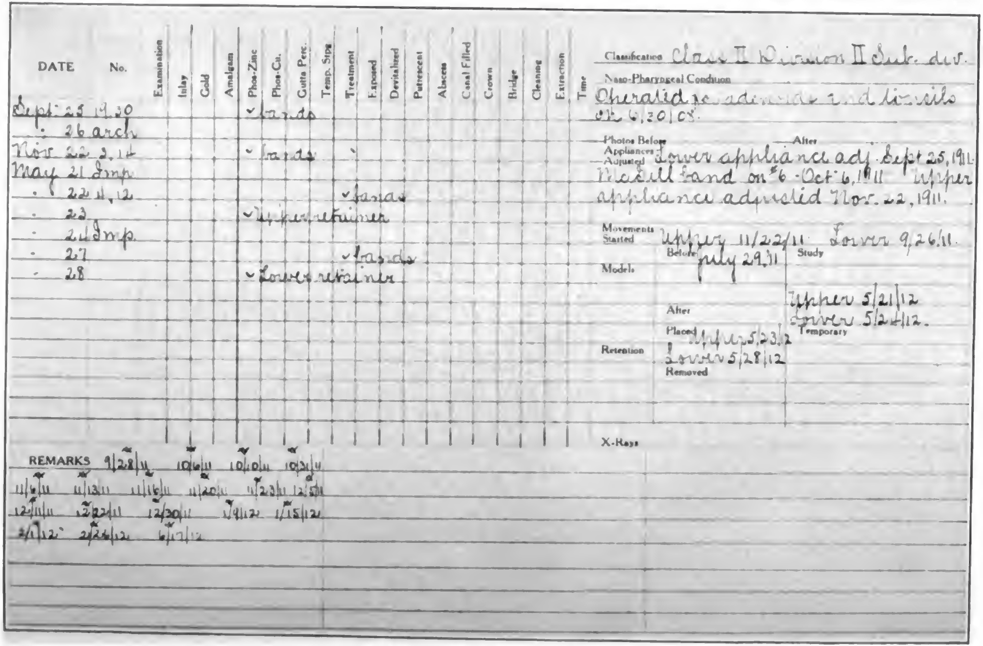
Name John Mulhern Age 15

DATE	No.	Examination	Inlay	Gold	Amalgam	Phos-Zinc	Phos-Cu.	Gutta Perc.	Temp. Stpg.	Treatment	Exposed	Devitalized	Putrescent	Abscess	Canal Filled	Crown	Bridge	Cleaning	Extraction	Time
1911																				
July 25	[illegible]	✓			✓															
" 27	[illegible]																	✓		
" 31	2					✓														
" 31	13				✓															
" 31	14									✓ [illegible]										
" 31	9					✓			✓			✓			✓					
Aug. 1	30				✓															
" 2	14								✓			✓								
" 2	18				✓															
Sept. 7	14								✓						✓					
" 11	14				✓															
" 19	21					✓														
Sept. 20	19, 30									✓ bands										

DATE	Letter	Amalgam	Phos-Zinc	Gutta Perc.	Temp. Stpg.	Treatment	Exposed	Devitalized	Putrescent	Abscess	Canal Filled	Cleaning

DENTAL DEPARTMENT. RECORD CARD OF A 15-YEAR-OLD BOY.



DATE	No.	Examination	Inlay	Gold	Amalgam	Phos-Zinc	Phos-Cu.	Gutta Perc.	Temp. Stpg	Treatment	Exposed	Devitalized	Putrescent	Abscess	Canal Filled	Crown	Bridge	Cleaning	Extraction	Time
Sept. 25	19 30					✓ bands														
" 26	arch																			
Nov 22	2. 14					✓ bands				✓										
May 21	Imp																			
" 22	11, 12									✓ bands										
" 23						✓ Upper retainer														
" 24	Imp.																			
" 27										✓ bands										
" 28						✓ Lower retainer														

REMARKS 9/28/11 10/6/11 10/10/11 10/31/11
11/6/11 11/13/11 11/16/11 11/20/11 11/23/11 12/5/11
12/11/11 12/22/11 12/30/11 1/9/12 1/15/12
2/1/12 2/24/12 6/7/12

Classification Class II Division II Sub. div.

Naso-Pharyngeal Condition Operated re adenoids and tonsils
on 6,30/08.

Photos Before After

Appliances Adjusted Lower appliance adj. Sept 25, 1911. Mesial band on #6 - Oct 6, 1911 upper appliance adjusted Nov. 22, 1911.

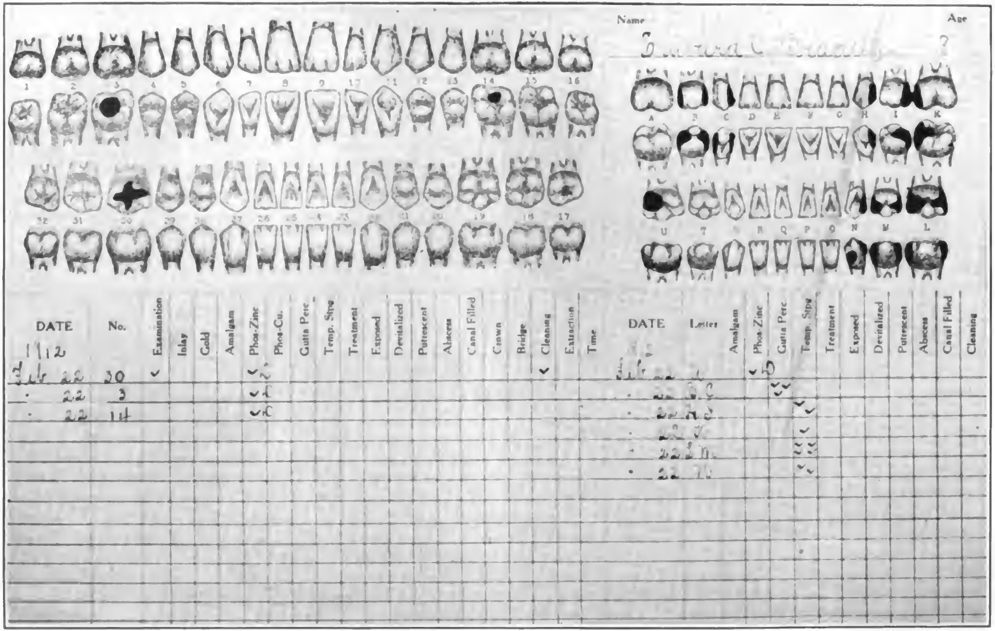
Movements Started Upper 11/22/11 Lower 9,26/11.

Models Before July 29, 11 Study After Upper 5/21/12 Lower 5/24/12.

Retention Placed Upper 5.23.12 Lower 5/28/12 Removed Temporary

X-Rays

REVERSE OF CARD SHOWN IN PLATE 6.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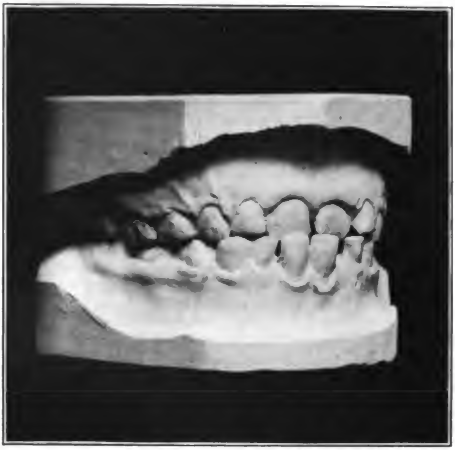
Name [illegible]

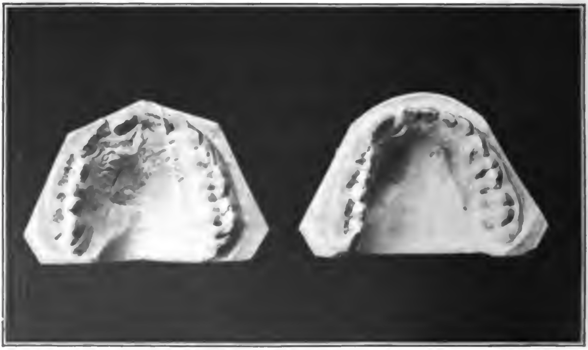
Age ?

DATE	No.	Examination	Inlay	Gold	Amalgam	Phos-Zinc	Phos-Cu.	Gutta Perc	Temp. Stop	Treatment	Exposed	Devitalized	Putrescent	Abscess	Canal Filled	Crown	Bridge	Cleaning	Extraction	Time
1912																				
Feb 22	30	✓				✓ [illegible]												✓		
" 22	3					✓ C														
" 22	14					✓ C														

DATE	Letter	Amalgam	Phos-Zinc	Gutta Perc	Temp. Stop	Treatment	Exposed	Devitalized	Putrescent	Abscess	Canal Filled	Cleaning
[illegible]												
Feb 22	[illegible]		✓ [illegible]									
" 22	[illegible] C			✓✓✓								
" 22	[illegible]				✓✓							
" 22	[illegible]				✓							
" 22	[illegible]				✓✓✓✓							
" 22	[illegible]				✓✓							

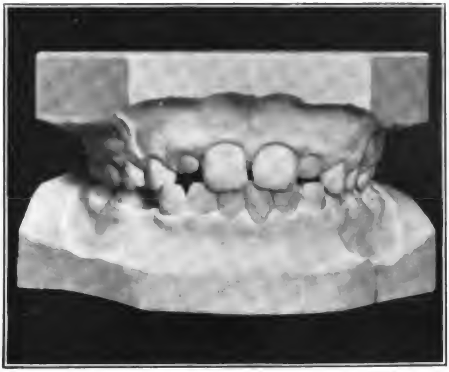
RECORD CARD OF BOY 8 YEARS OLD, MADE AT THE TIME OF ENTRANCE TO THE COLLEGE.

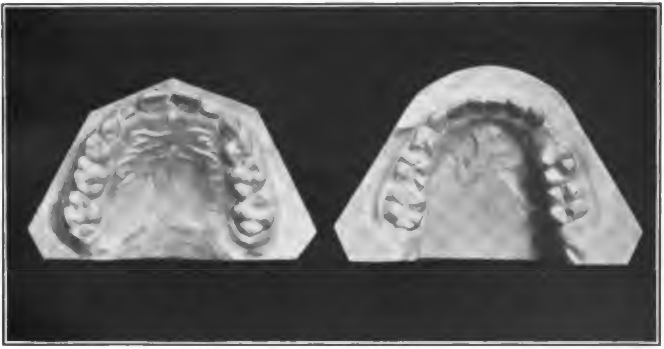




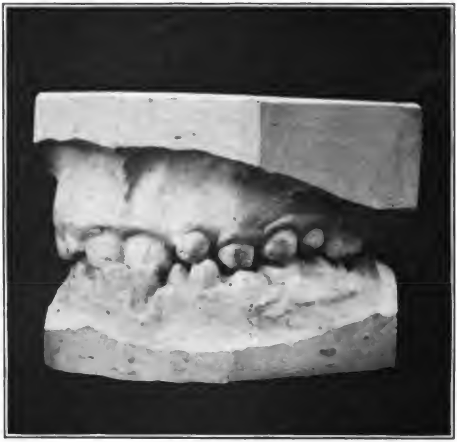
CASE OF 8-YEAR-OLD BOY BEFORE TREATMENT.

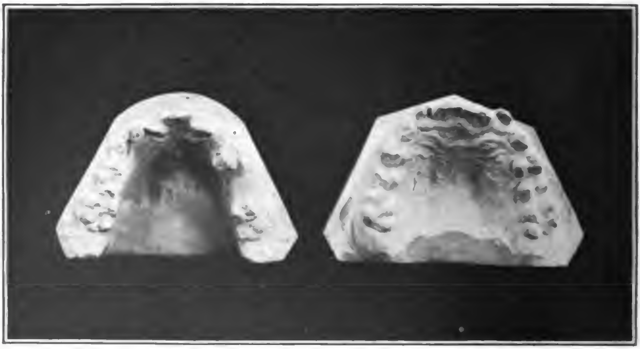
Upper central incisors erupting inside of the lower central incisors.





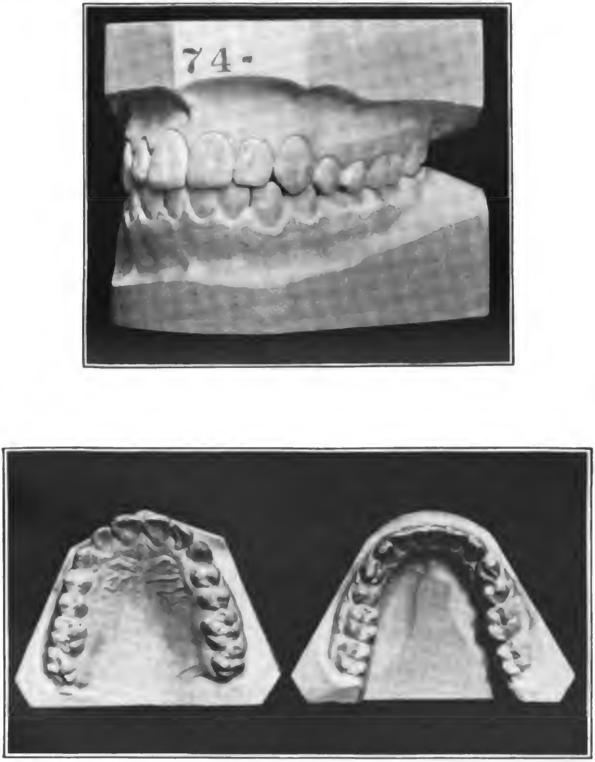
CASE SHOWN IN PLATE 9. THESE CASTS WERE MADE AFTER FOUR WEEKS' TREATMENT.



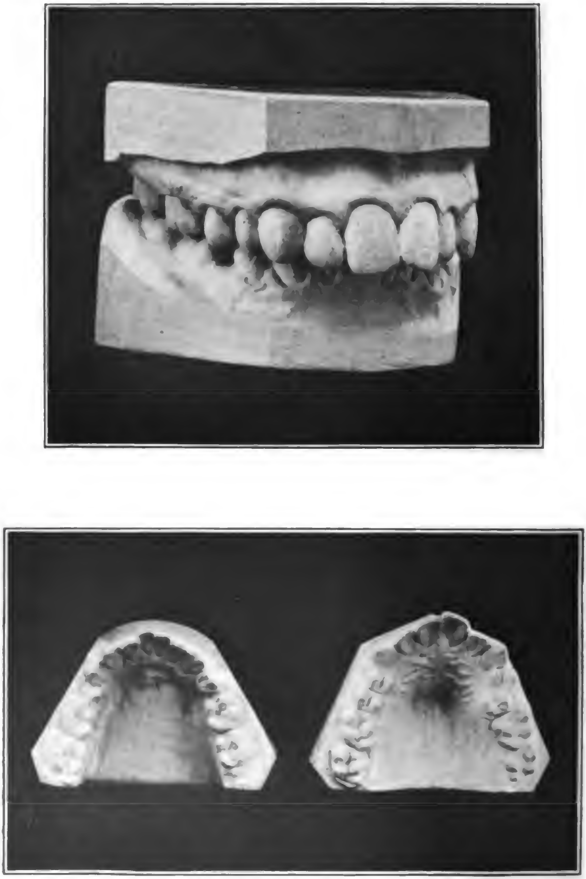


CASTS OF BOY 10 YEARS OF AGE.

Google

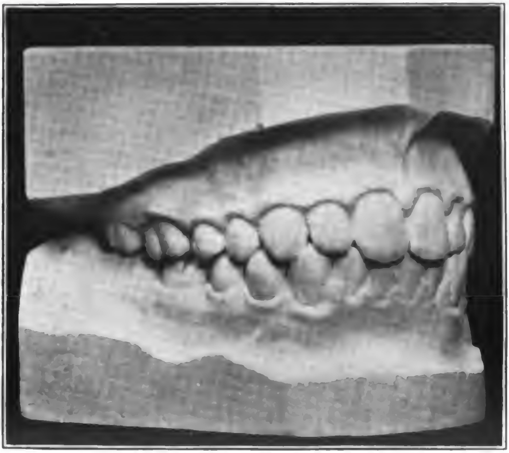


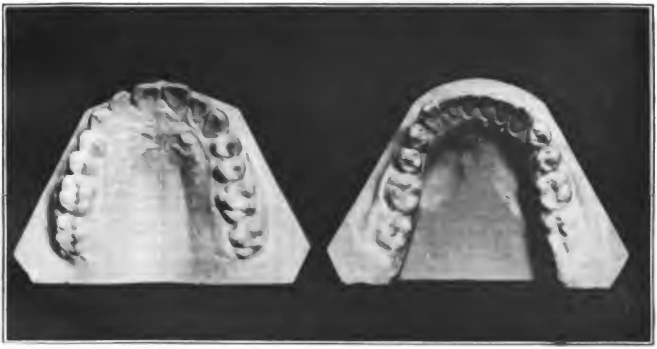
CASE SHOWN IN PLATE 13 AFTER TREATMENT.



CASE OF BOY 13 YEARS OF AGE.

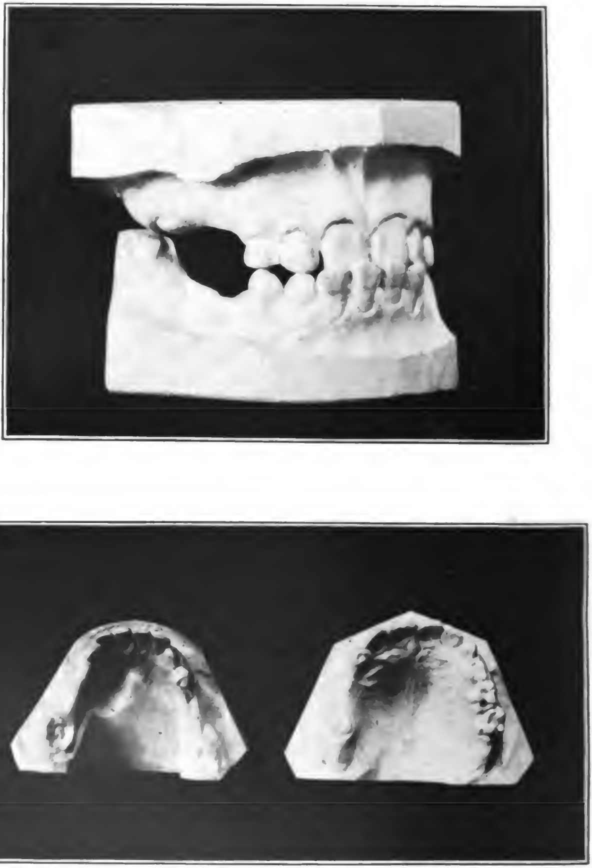
Lack of growth of the maxillary bones.





CASE SHOWN IN PLATE 15 AFTER TREATMENT.

Arches have been broadened and lengthened to accommodate all of the teeth.



"CRIMINAL NEGLIGENCE" IN THE CASE OF A BOY 8 YEARS OF AGE.

Five temporary molars and one permanent molar have been prematurely extracted, and two permanent molars are badly decayed. It will perhaps be four or five years before the permanent teeth will erupt to supply the child with any means of masticating his food.

DISEASED TEETH EXTRACTED.

Such teeth, if allowed to remain, become foreign bodies that will eventually set up an irritation and probably result in an incurable alveolar abscess.

The dental department of Girard College is under the care of a dentist in chief, two assistant dentists, and a clerical and mechanical assistant, all four of whom give their full time to the care of the boys in the college. After a thorough examination has been made and the condition of the oral cavity recorded, some simple and painless operation is performed, such as cleaning the teeth. In this way the boy's confidence and cooperation are gained, and he is interested in what is being done for his welfare. He is then given an appointment to return at a subsequent time, and his work is carried on and completed as rapidly as possible. His appointment is made for one hour and promptness is insisted upon. In this way he loses no more time from his school than is necessary.

A record card has been carefully prepared, so that every treatment and operation performed during each boy's attendance in the college can be kept on file and referred to at any time.

Plates 6 and 7 show a record card for a boy 15 years of age. The card indicates the thorough manner in which the work has been carried on, and the amount and character of the work which was necessary to put the boy's mouth in a healthy condition. Plate 8 is a copy of a record card of a boy 8 years of age, at the time of his entrance to the college. It was necessary to insert 14 large fillings in his temporary teeth to preserve them so that they might perform their normal function until they were naturally exfoliated and the normal eruption of the permanent teeth should take place. It also shows cavities filled in three of the erupting first permanent molars. This card indicated quite clearly the necessity of an examination and treatment of the temporary and permanent teeth at an early age.

It is not deemed sufficient to treat the boys in Girard College for present diseased conditions only, but to study the oral cavity as a whole. By prophylactic methods a healthy and aseptic condition is established as nearly as possible and the lost tissue is restored by means of fillings, etc. A study of each individual case is made as to its requirements. Malocclusion and irregularities of the teeth are studied by means of carefully taken plaster of Paris impressions, from which exact casts of the mouths are made. From these can be determined the lack of development and harmony of the alveolar process, the muscles, and surrounding tissues, which influence the growth of the jaws, going to make up a harmonious facial development.

The character of the work being done for our boys can perhaps be best shown by the accompanying photographs made from the plaster casts of some of the cases treated.

The first case (Pls. 9 and 10) is that of a boy 8 years of age. Plate 9 shows the case before treatment, with the upper central incisors erupting inside of the lower central incisors. Plate 10 shows pictures of casts made from the mouth of the same boy after four weeks' treatment.

The second case (Pls. 11 and 12) is that of a boy 10 years of age. Plate 11 shows the inside of the lower central incisors; the maldistribution of force in masticating of the superior centrals wedging between the lower central and lateral incisors had set up an irritation resulting in a diseased condition of the gum and bone tissues. Plate 12 shows photographs from casts made after two and one-half months' treatment. By establishing normal occlusial relations, the surrounding tissues returned to a healthy condition.

The third case (Pls. 13 and 14) is that of a boy 15 years of age. Plate 13 shows all the teeth in both arches out of harmony. The boy's ability to properly masticate his food is badly interfered with, and the lack of development of the superior maxillary bones and alveolar process has caused marked facial deformity, as well as interference with normal respiration. The crowded condition of the upper arch would clearly indicate that the temporary teeth had been neglected and perhaps prematurely lost and the early eruption of the permanent teeth had gone on unassisted. A few weeks' treatment at an early age, similar to that in the preceding cases, would probably have resulted in normal development. Plate 14 shows photographs from casts made of the same case after treatment. All of the teeth in both the upper and lower arches were widened and straightened; normal occlusial relations of the teeth were established; the growth of the alveolar process and maxillary bones was stimulated, and the normal function restored to all the surrounding tissues. Nine months' time was necessary for the active treatment of this case, and it will have to be kept under observation for perhaps one year longer before the bones will have assumed their full normal development and a permanent result assured.

The fourth case (Pls. 15 and 16) is that of a boy 13 years of age. Plate 15 shows the lack of growth of the maxillary bones and alveolar process, due to premature loss of the temporary teeth. The bite is closed, causing the lower central incisors to bite into the soft tissues in the roof of the mouth. Note the loss of space for the lower second right bicuspid, and that the superior left bicuspid is erupting inside of the arch. The narrow and crowded condition of both arches interferes with the normal functions of mastication and respiration. Plate 16 shows pictures of the same case after treatment. The arches are broadened and lengthened to accommodate all of the teeth. It required about nine months to produce this result, which could have been obtained in about as many weeks if taken at an early age, when a perfect result would have been assured by assisting nature a little. Too much emphasis can not be placed upon the necessity of early dental attention, and particularly the care of the temporary teeth. When they are lost prematurely, the permanent teeth erupt unassisted into various conditions of irregularity and malocclusion, which greatly interfere with the growth of the bones of the head. Interference with the organs of respiration results in a lack of normal development of the tissues of the body, following the improper oxygenation of the blood.

In the examination and treatment of approximately 42,000 teeth we found it necessary to extract 42 permanent teeth, or a loss of one-tenth of 1 per cent. This is a very low percentage of loss; thus, of 122 boys who entered the college in September, 1913, only 8 had received previous dental attention and 6 boys under 9 years of age had some of their first permanent molars in such a diseased condition that the surrounding tissues had become infected, due to the death of the dental pulp, the formative element of the tooth, before the roots of the teeth were fully developed. Plate 18 is a photograph of some of the teeth extracted, the diseased condition and lack of development of the apexes of the roots being determined by X rays. Such teeth become foreign bodies that will eventually set up an irritation and probably result in an incurable alveolar abscess.

A great many boys come into the department in a sadly neglected condition. Plate 17 shows photographs of casts of the mouth of a boy 8 years of age. Five temporary molars and one permanent molar have been prematurely extracted, and two permanent molars are badly decayed. This might properly be described as criminal negligence, since it will perhaps be four or five years before the permanent teeth will erupt to supply the child with any means with which to masticate his food. One can readily appreciate how this poor boy's physical development will be hindered.

Following is the number of operations performed in the dental department of Girard College during a period of 15 months:

Amalgam fillings	1, 843
Phosphate of zinc fillings	3, 480
Gutta-percha fillings	1, 149
Teeth devitalized	228
Putrescent teeth and abscesses treated	250
Root canals filled	857
Crowns and bridges inserted	10
Permanent teeth extracted	42
Permanent teeth replanted	1
Number of cases of malocclusion under treatment	74

CONCLUSIONS.

Certain conclusions seem warranted from the experience of Girard College in the care of the health of boys. Although the wards of the institution come with what is, on the whole, a bad family history, the death rate is low and the general condition of health favorable. By good sanitary conditions in the college and protection of the water and milk supply typhoid and other serious illness have been largely eliminated. Medical inspection and the correction of minor defects of the nose, throat, ear, eye, and other organs have contributed to the general good health of the pupils of the college, and the department of instruction in the institution reports that this care has markedly increased the school efficiency and materially reduced the problems of discipline. Perhaps the most evident good result has come from the new dental department. The present plan of caring for the teeth was introduced in September, 1911, and the improved condition in the health of the boys and in their personal appearance has been most marked since that date. The Board of Directors of City Trusts, which is officially responsible for the management of the college, and members of the staff which is carrying out their policies, unite in testifying to the notable service which a correct physical basis has given for the work of Girard College in rearing and educating its boys.

UNITED STATES BUREAU OF EDUCATION
BULLETIN, 1914, NO. 41 - - - - - - - WHOLE NUMBER 615

MONTHLY RECORD OF CURRENT EDUCATIONAL PUBLICATIONS

COMPILED BY THE LIBRARY DIVISION OF THE BUREAU OF EDUCATION, UNDER THE DIRECTION OF JOHN D. WOLCOTT, CHIEF OF DIVISION

NOVEMBER, 1914

DEPARTMENT OF THE INTERIOR

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CONTENTS.—Introductory notes—Publications of associations—Educational history and biography—Current educational conditions—Pedagogics and didactics—Educational psychology. Child study—Special methods of instruction—Special subjects of curriculum—Kindergarten and primary school—Rural education—Secondary education—Teachers: Training and professional status—Higner education—School administration—School management—School architecture—School hygiene and sanitation—Sex hygiene—Eugenics—Physical education—Play and playgrounds—Social aspects of education—Child welfare—Moral education—Religious education—Manual and vocational training—Vocational guidance—Folk high schools—Home economics—Commercial education—Education of women—Africans and Orientals—Education of deaf—Education of defectives—Libraries and reading—Bulletin of the Bureau of Education.

INTRODUCTORY NOTES.

Some notable books of the month are the following, the numbers in parentheses referring to the numbers of the full entries in this bulletin: Kerschensteiner, The schools and the nation, authorized translation (1490); Wallin, Mental health of the school child (1504); Kennedy, The Batavia system (1509); Howell, Pedagogy of arithmetic (1522); Klapper, Teaching children to read (1524); White and Davis, Rural schools in Texas (1544); Learned, The oberlehrer (1553); Fitch, The college course and the preparation for life (1560); Phelps Stokes, Memorials of eminent Yale men (1568); Morehouse, Discipline of the school (1578); Taylor, Handbook of vocational education (1625); Goddard, School training of defective children (1647).

The addresses of most of the periodicals represented in this number may be found by reference to the list at the end of this record for September, 1914.

Only publications of the Bureau of Education are available for free distribution by this office. All others here listed may ordinarily be obtained from their respective publishers, either directly or through a dealer, or in the case of an association publication, from the secretary of the issuing organization.

Books, pamphlets, etc., intended for inclusion in this record should be sent to the library of the Bureau of Education, Washington, D. C.

PUBLICATIONS OF ASSOCIATIONS.

1470. **Association of men teachers and principals of the city of New York.** Modern tendencies in education. Truancy and delinquency. [New York, the Singer press, 1914?] 39p. 8°.

Contains: 1. G. D. Strayer: The application of scientific method to the problems of education the most important modern tendency, p. 5–8. 2. H. H. Horne: Educational tendencies, p. 9–10. 3. W. H. Allen: Modern tendencies in education, p. 11. 4. Gustave Straubenmüller: Truancy and delinquency, p. 14–18. 5. H. W. Nudd: Truancy and delinquency, p. 24–27. 6. Important changes in the compulsory education law, p. 36–39.

1471. **Conference for education in the South *and* Southern educational association.** Proceedings of the seventeenth Conference for education in the South and the twenty-fifth annual meeting of the Southern educational association. Joint session, Louisville, Ky., April 7–10, 1914. 381p. 8°.

Contains: *Conference for education in the South*—1. Mary E. Frayser: Report of the Committee on household management, p. 33–38. 2. Susie V. Powell: Helping the community through the school, p. 54–57. 3. O. B. Martin: Boys' and girls' demonstration work in the Southern States, p. 57–62. 4. W. T. Brown: Training leaders for rural life, p. 102–5. 5. J. A. Ferrell: Intensive community health work, p. 183–86. 6. W. S. Rankin: The community aspect of the health problem, p. 187–95. *Southern educational association*—7. B. R. Payne: The training of teachers in the South, p. 221–33. 8. J. H. Highsmith: Teacher training in private and denominational colleges, p. 233–38. 9. A. L. Rhoton: The responsibility and opportunity of the private and denominational college in the training of teachers, p. 238–42. 10. Mrs. D. Breckinridge: The city school as a social center, p. 250–53. 11. W. Lou Gray: What should a superintendent or supervising teacher do when visiting a school? p. 255–58. 12. P. P. Claxton: [Improvement of rural schools] p. 270–71. 13. F. M. Bralley: How may educational institutions best keep in touch with their graduates and former students in order to assist them in local community development? p. 281–86. 14. Jessie Field: Leadership for rural communities from our institutions of higher learning, p. 291–92. 15. W. G. Frost: What the college can do for the community, p. 294–96. 16. R. B. Daniel: Some experiments in vocational education in a mill community, p. 302–5. 17. J. A. Baldwin: Statement of educational conditions in Southern cotton mill communities, p. 306–14. 18. Elizabeth G. Holt: The teaching of home-making in a mill community, p. 317–20. 19. R. M. Kennedy: The county library movement, p. 322–29. 20. Pearl W. Kelly: How the State may aid school libraries, p. 329–33. 21. W. Lou Gray: Co-operation in building a country school system, p. 335–39. 22. Mabel C. Williams: How can the town library serve the country community? p. 339–42.

1472. **Dental faculties association of American universities.** Proceedings of the sixth annual meeting held at Minneapolis, Minn., March 20 and 21. 1914. Philadelphia, Press of the "Dental cosmos," 1914. 24p. 8°.

1473. **Georgia educational association.** Proceedings and addresses of the forty-eighth annual meeting . . . Macon, Ga., April 23–25, 1914. 103p. 8°. (C. L. Smith, secretary, LaGrange, Ga.)

Contains: 1. M. L. Brittain: Georgia education—a survey, p. 19–26. 2. W. K. Tate: The relation of the rural school to the economic development of the South, p. 26–28. 3. C. R. McCrory: State publication of school books, p. 28–39. 4. Otis Ashmore: Discussion of the State manufacture and control of school texts, p. 39–43. 5. J. H. Phillips: The social realm in education, p. 43–53. 6. E. R. Park: The health of the pupil, p. 53–59. 7. Carol P. Oppenheimer: Relation of the kindergarten to primary school, p. 71–75. 8. L. B. Evans: State manufacture and control of text-books, p. 78–88.

Dr. Phillips's paper has been reprinted in pamphlet form under title of "The social ideal in education."

1474. **Nationaler deutschamerikanischer lehrerbund.** Protokoll der 42. jahresversammlung, Chicago, Ill., 30. Juni bis 3. Juli 1914. Monatshefte für deutsche sprache und pädagogik, 15: 234–44, September 1914.

The number also contains: 1. Leo Stern: Ansprache des bundespräsidenten, p. 244–46. 2. Oscar Burckhardt: Die amerikanische bühne als bildungsfaktor, p. 246–57.

1475. **Northwestern Wisconsin teachers' association.** Monograph souvenir of the twenty-third annual meeting, also including a condensed history of the association and a journal of the proceedings and addresses of the 1913 meeting, held at Eau Claire, Wis., October 17–18, 1913. Eau Claire, Wis., Eau Claire press co. [1914?] 68p. 8°. (Matilda Miller, secretary, Eau Claire, Wis.)

Contains: 1. W. A. Clark: [Defense of the public schools] p. 26–32. 2. John Phelan: The problem of the rural school, p. 36–42. 3. Frances Cleary: The Latin teacher's special duty, p. 43–46

EDUCATIONAL HISTORY AND BIOGRAPHY.

1476. **Fitzpatrick, Frank A.** James M. Greenwood: an appreciation. Educational review, 48: 288–93, October 1914.

A biographical sketch of the career of Prof. Greenwood, superintendent of schools at Kansas city, from 1874 until August 1, 1914.

1477. **Greenstone, Julius H.** Jewish education in the United States. *In* The American Jewish year book, 5675, 1914–1915, ed. by H. Bernstein for the American Jewish committee. Philadelphia, The Jewish publication society of America, 1914. p. 90–127.

A forceful presentation of the things already accomplished in the field of Jewish education, and the important problems still to be worked out.

1478. **Spranger, Eduard.** Der zusammenhang von politik und pädagogik in der neuzeit, umrisse zu einer geschichte der deutschen schulgesetzgebung und schulverfassung. Deutsche schule, 18: 13–21, 73–80, ———, 290–99, 356–66, January, February, March, May, June 1914.

1479. **Thomas, Calvin.** Rudolf Tombo, Jr. Columbia university quarterly, 16: 357–64, September 1914.

A sketch of his life and work.

CURRENT EDUCATIONAL CONDITIONS.

1480. **Educational writings.** Elementary school journal, 15: 68–81, October 1914.

A review of the periodicals devoted to education, also the educational bulletins of the federal government and private foundations. Commends the work of the Bureau of education.

1481. **Graue, ———.** Wandervogel-bestrebungen. Pädagogische warte, 21: 713–17, June 15, 1914.

Criticism and appreciation of the work of the "Wandervogel" young people's league. Also discussed by K. E. Brachwitz, Pädagogische warte, 21: 905–7, August 1, 1914; and by Eberhard, in Allgemeine deutsche lehrerzeitung, 66: 339–43, August 28, 1914.

1482. **Jahrbuch der königlichen preussischen auskunftstelle für schulwesen.** Erster jahrgang, 1913. Berlin, Ernst Siegfried Mittler und sohn, 1914. 424 p. 4°.

CONTENTS.—I. Übersicht über die staatlichen und staatlich anerkannten unterrichtsanstalten in Preussen. A. Für die männliche jugend. B. Für die weibliche jugend. C. Für knaben und mädchen. *Anhang:* Deutsche schulen ausserhalb des Deutschen Reiches. p. 1–117.—II. Verzeichnis der an den höheren lehranstalten Preussens eingeführten schulbücher (1906–1912) p. 118–26.—III. Empfehlenswerte lehrmittel für volks- und höhere schulen, p. 127–313.—IV. Schulstreit oder schulfriede? Eine prüfung des bestandes und der zukunftsziele des höheren schulwesens; von Professor Dr. Paul Förster, p. 314–42.—V. Volkshochschulen mit besonderer berücksichtigung der Humboldt-akademie und der Freien hochschule; von Dr. Oscar Stillich, p. 343–56.—VI. Gesundheitspflege und leibesübungen, spiel und sport in der volksschule; von Dr. Luckow, p. 357–76.—VII. Zur schularztfrage in der fortbildungsschule; von W. Schulze, p. 377–82.—VIII. Zwei neuere schulen in Berlin-Steglitz;

von Müller, p. 383–94.—IX. Elektrische experimentier-anlagen; von G. Quaink, p. 395–402.—X. Statistisches über das schulwesen des Deutschen Reiches, p. 403–24.

Dr. Förster's article (IV) proposes radical changes in organization and conception of aims of the German educational system, which would, in many respects, approximate it to the American system and meet modern demands and criticism.

1483. **Kerschensteiner, Georg M. A.** Die nationale einheitsschule. Säemann; monatsschrift für jugendbildung und jugendkunde, July 1914, p. 266–72.

Report of an address delivered at the Kiel (1914) meeting of German teachers. A contribution to the prevalent discussion of proposals and counter-proposals to meet the growing demand for a differentiation of schools and courses of study and their adjustment to the pupil's individual abilities and needs, without surrendering the realization of civic and national aims.

1484. **Messer, August.** Förster contra Wyneken. Internationale monatsschrift für wissenschaft, kunst und technik, 8: 1393–1403, August 1914.

A vigorous reply, by a professor of philosophy at the University of Giessen, to Friedrich W. Förster's (professor emeritus, University of Vienna) criticism (*in* Süddeutsche monatshefte, May 1914, p. 249–63) of Gustav Adolf Wyneken's book "Schule und jugendkultur," Jena 1914. The author declares Förster's depreciatory criticism of Wyneken's book to be unfair and subjective, while he charges Förster with counseling the abandonment of the principle of inner freedom and autonomy, which is of central importance in Wyneken's work, for the principle of authority. Wyneken's book and his propagandist activity have become a storm center of pedagogical discussion.

1485. Pädagogische jahresschau über das volksschulwesen im jahre 1913. In gemeinschaft . . . hrsg. von E. Clausnitzer. VIII. Band. Leipzig und Berlin, B. G. Teubner, 1914. 458 p. 8°

1486. **Patterson, Herbert P.** Ideals in present-day education. Educational review, 48: 254–65, October 1914.

Discusses the various ideals influencing education—scientific, vocational, ethical, political, etc. The task before educators is to coordinate these ideals into one harmonious system.

1487. **Strunsky, Simeon.** School. Atlantic monthly, 114: 546–55, October 1914.

A humorously critical article on modern school methods.

PEDAGOGICS AND DIDACTICS.

1488. **Babo, M. von.** Die zukunftsschule. Ein praktischer vorschlag für eine völlige neugestaltung unseres schulwesens. Stuttgart, W. Spemann, 1914. 205 p. 8°.

1489. Classroom methods and devices. Elementary school journal, 15: 82–95, October 1914.

A symposium. Discusses: "A sixth-grade English unit," by Edith P. Parker; "Drill in multiplication," by James O. Lucas; "A course in agriculture;" and "Penmanship recommendations."

Mr. Lucas has found it advantageous "to substitute for drill in the multiplication tables a series of problems." Presents an example.

1490. **Kerschensteiner, Georg M. A.** The schools and the nation . . . authorized translation by C. K. Ogden . . . with an introduction by Viscount Haldane. London, Macmillan and co., limited, 1914. xxiv, 351 p. illus. 12°

Tr. from "Grundfragen der schulorganisation." Preface by author.

1491. **Lyans, C. K.** The doctrine of formal discipline. Pedagogical seminary, 21: 343–93, September 1914.

Bibliography: p. 392–93.

1492. **Pfordten, Otto von der.** Das gefühl und die pädagogik. Heidelberg, C. Winter, 1914. 133 p. 8°.

1493. **Sanders, Frederic W.** The organization of education. Education, 35: 98–106, October 1914.

Continued from May number. Treats of the secondary transition department of the school for pubescents. Outlines a curriculum for the required courses.

EDUCATIONAL PSYCHOLOGY, CHILD STUDY.

1494. **Ballou, Frank W.** The significance of educational measurement. Pittsburgh school bulletin, 8: 2002–5, September 1914.

1495. **Brigham, Carl C.** An experimental critique of the Binet-Simon scale. Journal of educational psychology, 5: 439–48, October 1914.

"The author applied the Binet tests to 309 children in the first six grades of the Princeton model school. The scale was found to measure the intelligence of children from seven to eleven years of age with at least 96 per cent. efficiency, and it also proved very sensitive in indicating individual differences in groups of children of the same age."

1496. **Dallenbach, Karl M.** The effect of practice upon visual apprehension in school children. Journal of educational psychology, 5: 321–34, 387–404. June. September 1914.

"With children practice increases the ability to apprehend visually not only the material presented, but other material more or less dissimilar in kind."

1497. **Hill, David Spence.** Minor studies in learning and relearning. Journal of educational psychology, 5: 375–86, September 1914.

Read before Section H of the American association for the advancement of science, Atlanta, Ga., January 1, 1914.

"The author presents the results of experiments with mirror drawing, a class experiment on periods of learning in which the substitution test was employed, and a new form of the cancellation test with the results of its use."

1498. **Kirkpatrick, E. A.** An experiment in memorizing versus incidental learning. Journal of educational psychology, 5: 405–12, September 1914.

"The author believes that time is wasted in memorizing the multiplication tables, and presents experimental evidence to show that better results are gained by placing in the children's hands multiplication sheets which they use in written multiplication, and thus gradually come to know the results of the combinations by repeated use."

1499. **Kuno, *Mrs.* Emma E.** How a knowledge of the characteristics of the adolescent boy may aid one in directing his conduct. Pedagogical seminary, 21: 425–39, September 1914.

1500. **Mead, Cyrus D.** Height and weight of children in relation to general intelligence. Pedagogical seminary, 21: 394–406, September 1914.

Bibliography: p. 406.

1501. **Rowe, E. C.** Five hundred forty-seven white and two hundred sixty-eight Indian children tested by the Binet-Simon tests. Pedagogical seminary, 21: 454–68, September 1914.

A number of tables are given showing the details of the study.

1502. **Stern, William.** Eigenschaften der frühkindlichen phantasie. Zeitschrift für pädagogische psychologie und experimentelle pädagogik, 15: 305–13, June 1914.

Foot-note states: "Entnommen dem in kürze erscheinenden werke 'Psychologie der frühen kindheit bis zum 6. lebensjahre'; von Prof. W. Stern, mit benutzung ungedruckter tagebücher von Klara Stern. Verlag von Quelle & Meyer, Leipzig."

1503. **Taylor, E. H.** A comparison of the arithmetical abilities of rural and city school children. Journal of educational psychology, 5: 461–66, October 1914.

"Read before the Child study section of the Illinois State teachers' association, December 1913."

"As measured by the Courtis tests, series A, rural school children are from one to two grades behind city school children. Four months of specific drill materially reduced this difference."

1504. **Wallin, John Edward Wallace.** The mental health of the school child, the psycho-educational clinic in relation to child welfare; contributions to a new science of orthophrenics and orthosomatics. New Haven, Yale university press; [etc., etc.] 1914. xiii, 463 p. diagrs. 8°

"Most of the chapters of the book are reprinted ... from various periodicals."—Pref.

1505. **Winch, W. H.** Further experimental researches on learning to spell. Journal of educational psychology, 5: 449–60, October 1914.

"Previous researches in a boys' school with pupils of a rather low grade of mental development showed that it was of advantage to present the words by a method which combined as many stimuli as possible. The present experiment shows that with girls of high mental ability the method of silent visual study is superior."

SPECIAL METHODS OF INSTRUCTION.

1506. **Francis W. Parker school,** *Chicago.* Year book, vol. III, June 1914. Expression as a means of training motive. Chicago, Francis W. Parker school, 1914. 188 p. illus. 8°

Contains articles on following topics: (1) Play as fundamental in education, (2) Oral reading, (3) The value, place, and use of the dramatic instinct in the education of young people, (4) A teachers' meeting, (5) Clay modeling, (6) Metal working, (7) Making a rug, (8) The social application of painting and drawing.

1507. **Hendley, Flora L.** A practical solution of the moving picture problem. Teachers magazine, 37: 50–51, October 1914.

In using moving pictures in school work, the chief problem is how to bring the pictures to the children, or the children to the pictures. This article shows how this problem was successfully solved by some schools of Washington, D. C.

1508. **Johnson, W. Templeton.** The Parker school in the open air at San Diego, California. Pittsburgh school bulletin, 8: 2012–16, September 1914.

1509. **Kennedy, John.** The Batavia system of individual instruction. Syracuse, N. Y., C. W. Bardeen, 1914. xxi, 209 p. illus. 8°

SPECIAL SUBJECTS OF CURRICULUM.

1510. **Armstrong, Henry E.** Science and the school. School world (London) 16: 333–37, September 1914.

Writer says the great mistake in English schools is that of attempting to teach "the elements of this or that special branch of science; what we should seek to do is to impart the elements of scientific method and inculcate wisdom, so choosing the material studied as to develop an intelligent appreciation of what is going on in the world. It must be made clear, in every possible way, that science is not a mere body of doctrine, but a method; that its one aim is the pursuit of truth."

1511. **Churchman, Philip H.** On the teaching of French pronunciation. School review, 22: 545–54, October 1914.

Says that good results will come from hard work alone. "But this hard work can be simplified by the scientific method, the inductive approach, and the principle of contrast by perspective."

1512. **Clark, Clifford P.** The translation habit. Classical journal, 10: 17–28, October 1914.

Denounces the use of the "so-called *pony*" as the "most insidious influence tending to undermine Latin study." Presents measures to prevent such use, as follows: "1. Banishment of the translation by the lecture method; 2. Banishment by compulsion, in the form of a pledge or law; 3. Banishment by making the student a butt of ridicule; 4. Banishment by insistence on important details; 5. Banishment of the translation by making 'sight translation' the final and supreme test for promotion," etc.

1513. **Copeland, E. B.** Botany in the agricultural college. Science, n. s. 40: 401–5. September 18, 1914.

Writer says that the main cause of the failure of the college of agriculture is that "the kind of agricultural problems which are presented, discussed, and worked with in its classes, are not the kind which it is practicable for a farmer to work with after he graduates. The graduate is not equipped to find employment for his intellect on the farm."

1514. **Cordrey, Everett E.** Physics in the high school. Arkansas teacher, 2: 12–15, October 1914.

To be concluded in the November issue.

"The purpose of this paper is to deal briefly with the history of physics, content and organization of first year physics course, together with a few suggestions relative to the pedagogy of physics."

1515. **Cragun, J. Beach.** A psychological analysis of the basis on which credit for the study of music is to be placed. School music, 15: 13–16, 19–20, September–October 1914.

"This paper will not concern itself with the amount of credit offered, but will attempt to indicate the bearing of the subject of music on the mental development of the child, the difficulties to be overcome in getting music upon the proper accredited basis, and will endeavor to offer some aids to your own thinking as a means to this end."

1516. **D'Ooge, Benjamin L.** High school Latin and the college entrance requirements. Classical journal, 10: 29–40, October 1914.

Advocates, among other things, a two-year Latin course "so rich and full, so vital and interesting, that it will be altogether worth while for the great army that does not go beyond." Discusses the requirements formulated for the third and fourth years.

1517. **Dykema, Peter W.** Community music—an opportunity. School music, 15: 6–12. September–October 1914.

Outline of an address delivered before the Department of music education of the National education association at St. Paul.

1518. **Egan, Rose F.** Scientific methods in the study of literature. Catholic educational review, 8: 232–45, October 1914.

1519. **Faithful, Lilian M.** English literature and language. Journal of education (London) 46: 684–86, October 1, 1914.

Says that language should never be regarded merely as "a linguistic exercise; words should be living realities to be made friends with, not dead bodies to be dissected."

1520. **Heuser, Frederick J. W.** College entrance examinations in German. Educational review, 48: 217–26, October 1914.

Advocates the oral test, but such test should be supplementary. Writer says: "The written test must continue to be the backbone of the examination, unless the study of German is to lose one of its fundamental educational values, the training in accuracy and painstaking care."

1521. **Holzwarth, Charles.** First-year Latin and first-year German. School review, 22: 540–44, October 1914.

A reply to Mr. Senger's article "A comparison of the first-year courses in Latin and German," in School review for May 1914. Criticises Mr. Senger's point of view.

1522. **Howell, Henry Budd.** A foundational study in the pedagogy of arithmetic. New York, The Macmillan company, 1914. xi, 328 p. 8°.

Bibliography: p. 309–12.

Presents, first, a very complete résumé of the extensive experimental literature on the psychology and pedagogy of arithmetic; secondly, the results of the author's own research of the arithmetical abilities of certain school children, and the problem of the school child's concepts of number.

1523. **Jackson, Leroy F.** A single aim in history teaching. History teacher's magazine, 5: 245–48, October 1914.

"This paper is the result of an attempt to locate and evaluate the province of the history teacher in a scheme of twentieth century education."

1524. **Klapper, Paul.** Teaching children to read. New York, D. Appleton and company, 1914. 213 p. 12°.

Author says that "this book is given solely to the task of aiding teachers, who are seeking a method that has stood the pragmatic test, and that may, therefore, help them in their day's work."

1525. **Löffler, Eugen.** Die freiere gestaltung des mathematisch-naturwissenschaftlichen unterrichts in den oberen klassen der höheren schulen. Monatshefte für den naturwissenschaftlichen unterricht aller schulgattungen, 7: 385–95, July 1914.

To be concluded.

Proposes a bifurcation into a language group and a mathematics-science group for the upper grades of the gymnasium. Still greater freedom and adjustment to the pupil's needs and abilities are to be secured by offering special or elective courses. The aim and method of pursuit of the study of mathematics and the natural sciences should not be identical in the two groups.

1526. **Mensel, Ernest H.** The one-unit preparation in a modern language for admission to college. Education, 35: 65–76, October 1914.

Says that if the "one-year course is allowed to continue its existence, it should be granted a longer lease of life only on the condition that it be continued after the student's entrance to college until a certain degree of proficiency is reached."

1527. **Miller, Edwin L.** Separating composition from literature in the high school. English journal, 3: 500–12, October 1914.

A paper read before the National council of teachers of English at St. Paul, Minnesota, July 9, 1914.

There are those who believe that the study of literature should be separated from that of composition and there are those who believe the opposite. "To show why and in what sense both are right is the first object of this paper. Its second object is to show how these apparently divergent views can be so reconciled in practice as to secure the advantages of both theories without sacrificing the benefits of either."

1528. **O'Brien, Harry R.** Agricultural English. English journal, 3: 470–79, October 1914.

1529. **Opdycke, John B.** The teaching of vocational English—(IV). Journal of education, 80: 347–48, 353–54, October 15, 1914.

Letter-writing adjusted to business and vocational demands.

1530. **Osgood, Edith W.** The development of historical study in the secondary schools of the United States. School review, 22: 511–26, October 1914.

Concluded from previous number of School review. Thanks to the labors of the Committee of ten and the Committee of seven, the teaching of history has been put on "a scientific basis, and the outlook is bright." A review of early conditions in the schools.

1531. **Perkins, Albert S.** Latin as a vocational study in the commercial course. Classical journal, 10: 7–16, October 1914.

Outlined in Journal of home economics, October 1914.

Work in the Dorchester high school, Massachusetts. Shows the value of Latin in extending the knowledge of English; vocabulary building, etc. Lays stress on comparative word study and grammar. Course has met with the greatest favor and success.

1532. **Rippmann, Walter.** A standard for the King's English. Educational times (London) 67: 430–31, September 1, 1914.

In conclusion urges the Board of Education of Great Britain "to summon a conference on standard speech, representative of the English-speaking world." A conference not only Imperial, but Anglo-American.

1533. **Voaden, J.** Nature study and the teacher; or, the point of view in nature study. School (Toronto, Canada) 3: 115–18, October 1914.

1534. **Winge, Axel P.** Der naturwissenschaftliche unterricht in den höheren schulen Schwedens. Monatshefte für den naturwissenschaftlichen unterricht aller schulgattungen, 7: 289–97, 343–52, 404–08, May, June, July 1914.

An account of courses of study, methods, textbooks, and preparation of teachers. The author notes the growing conviction that requiring all the studies of a full curriculum of all students produces superficiality. Some form of group system, with major subject as the core of each group, is coming to be looked upon as the most rational solution.

KINDERGARTEN AND PRIMARY SCHOOL.

1535. **Groszmann, Maximilian P. E.** Adaptation of the work of the kindergarten to the needs of individual children. Kindergarten review, 25: 65–74, October 1914.

Address given before the Department of kindergarten education, National education association, St. Paul, July 1914.

1536. **Smith, H. Bompas.** The Montessori conference. Educational times (London) 67: 418–19, September 1, 1914.

Report of conference at East Runton, England. Dr. Walker and others criticised Dr. Montessori's methods on the ground that "they failed to foster the child's imagination and religious instincts."

RURAL EDUCATION.

1537. **Andress, J. Mace.** Solving country life problems in Massachusetts. Education, 35: 91–94, October 1914.

The work of the State normal school at Worcester, Mass.

1538. **Butterfield, Kenyon L.** The training of rural leaders. Survey, 33: 13–14, October 3, 1914.

Deplores lack of rural leaders. Advocates the endowment, at strategic points, of schools of rural social service, in connection with standard educational institutions, preferably agricultural colleges.

1539. **Ferrell, John A.** The rural school and hookworm disease. Washington, Government printing office, 1914. 43 p. plates. 8° (U. S. Bureau of education. Bulletin, 1914, no. 20.)

1540. **Kirk, Will T.** A new standard for rural schools. American motherhood, 39: 227–29, October 1914.

An account of how H. C. Seymour, school superintendent of Polk county, Oregon, has improved the rural schools by "standardization."

1541. **Kramer, Mary Eleanor.** A new graft on the old tree of learning. Popular educator 32: 86–88, October 1914.

The schools of Cook county, Ill., under the direction of Mr. Tobin and his five "country-life experts."

1542. **Lewis, Howard T.** The social survey in rural education. Educational review, 48: 266–87, October 1914.

Treats of the schoolhouse as a common meeting place and as a clearing house for the community's activities, etc.

1543. **Nydegger, J. A.** Rural schools. Sanitary survey of schools in Bartholomew county, Ind. Washington, Government printing office, 1914. 16 p. 8° (United States public health service. Reprint no. 177 from the Public health reports, February 6, 1914.)

1544. **White, E. V.** *and* **Davis, E. E.** A study of rural schools in Texas. Austin, University of Texas, 1914. 167 p. illus. 8° (Bulletin of the University of Texas, no. 364. Extension series, no. 62. October 10, 1914.)

SECONDARY EDUCATION.

1545. **Alsup, T. E.** What high school students want. Missouri school journal, 31 : 447–53, October 1914.

"Two years ago seventy-five students of the Louisiana (Mo.) high school filled out blanks showing (1) the three or more qualities of a teacher admired, (2) the three or more qualities of a teacher despised, (3) the three or more qualities admired of a student, and (4) the three or more qualities despised of a student." This paper sums up the answers received.

1546. **Baker, E. E.** The extent and causes of failures in the high school. Wyoming school journal, 11 : 24–27, September 1914.

Gives figures to show the extent of failures in the Laramie high school and enumerates the reasons therefor.

1547. **Brown, H. A.** The function of the secondary school. Educational review, 48 : 227–40, October 1914.

Notes the large increase of attendance at secondary schools throughout the country. Gives some of the new types of schools springing up to meet the changing needs of society. Says that industrial education should be given in the high school. Discusses the questions, "What is vocational education?" "What is liberal education?" Thinks the secondary school course should be "broadly educational but largely within the field of the industrial arts.'

1548. **Perry, John.** Education and modern needs. School world (London), 16 : 328–33, September 1914.

An arraignment of the English public school—Eton, Harrow, etc. Describes educational conditions in such institutions as mediaeval and worthless. Inveighs against compulsory Latin.

1549. **Wheelock, Charles F.** Secondary education. Albany, The University of the state of New York, 1914. 77 p. 8°. (University of the state of New York bulletin, no. 575, September 15, 1914.)

From the 10th Annual report of the New York state education department. Contains brief synopses of laws for promotion of secondary education recently enacted by the various states, and of statutory requirements for high school teachers' certificates.

TEACHERS: TRAINING AND PROFESSIONAL STATUS.

1550. **Dakin, W. S.** A plan for training teachers while in service. Elementary school journal, 15 : 106–9, October 1914.

Discusses the problem of training teachers for rural schools. Cites system developed in the country schools of Connecticut.

1551. **Hodgson, Elizabeth.** Are teachers human? American teacher, 3 : 102–104, September 1914.

Summarizes what the world says about teachers, and then gives a set of rules for teachers to follow in order that the world may regard them as full-orbed men and women rather than a race of thin-blooded book-worms.

1552. **Horn, P. W.** Building the teacher's personality. Texas school magazine, 17 : 10–11, 39–42, October 1914.

Gives some suggestions for strengthening the personality of the teacher.

1553. **Learned, William Setchel.** The oberlehrer, a study of the social and professional evolution of the German schoolmaster. Cambridge, Harvard university press, 1914. xiv, 150 p. 8°. (Harvard studies in education, pub. under the direction of the Division of education, vol. 1)

Bibliography : p. 146–50.

1554. **Tränckner, Chr.** Die philosophischen elemente in der lehrerbildung. Pädagogische blätter, 43 : 381–90, heft 8, 1914.

Contends that all of the candidate's studies should not only be given a philosophic underpinning, but should be penetrated with philosophic understanding and in turn yield philosophic insight.

1555. **Witham, Ernest C.** Teacher measurement. Atlantic educational journal, 10: 24-25, September 1914.

Gives the scale for measuring teachers, together with graph cards, which have now both been separately published. An account of the system first appeared in the Journal of educational psychology, May 1914 (item 909 in this record).

1556. **Wollenhaupt, W. F.** The distribution of teachers with regard to the means through which positions are secured. Illinois teacher, 3: 1-4, October 1914.

"The object of this study is two-fold: 1st, to ascertain the distribution of teachers in Illinois schools according to sex and the types of positions they hold; 2d, to ascertain to what extent teachers in the various types of positions secure their positions through teachers' agencies."

HIGHER EDUCATION.

1557. **Capen, Samuel P.** The Division of higher education of the Bureau of Education. High school quarterly, 3: 17-21, October 1914.

Explains the purpose and the work of the Division of higher education.

1558. **Conover, Milton.** Should Congress establish a National university? Journal of education, 80: 293, 299-300, October 1, 1914.

Answers some objections that have been made to the establishment of a National university.

1559. **Fischer, Martin H.** The spirit of a university. Science, 40: 464-71, October 2, 1914.

Defines the work and spirit of the university. Says: "The best universities, perhaps the only universities known, and the spirit of which every country is busy copying, have no boards of trustees whatsoever, and no presidents."

1560. **Fitch, Albert Parker.** The college course and the preparation for life. Eight talks on familiar undergraduate problems. Boston and New York, Houghton Mifflin company, 1914. 227 p. 12°.

CONTENTS.—1. Where all the problems begin.—2. The struggle for personal recognition.—3. The fight for character.—4. The religious instinct and the Christian experience.—5. The exceeding difficulties of belief.—6. Religion and scholarship.—7. Is learning essential?—8. The distaste for the beautiful.

1561. **Fitzpatrick, Edward A.** The universities and training for public service. Survey, 32: 614-15, September 19, 1914.

Says there is an "indubitable demand for trained men for public service." What the universities are doing in the matter.

1562. **Keidel, Heinrich.** Der deutsche lehramtsassistent in Amerika. Preussische jahrbücher, 157: 261-67, August 1914.

The author, who was 1912-1913 exchange professor at the University of Wisconsin, and at present is an instructor in Ohio State university, writes concerning the qualifications of the prospective exchange teacher, and of the difficulties and tasks he will find himself called upon to face.

1563. **Krauel, H.** Was will die Wheeler-gesellschaft? Hochschul-nachrichten, 24: 342-43, June 1914.

Aims at a discussion of the questions of German and foreign, especially American, higher education.

The "Wheeler-gesellschaft" resulted from the seminar on the systems of higher education in Germany and America, which Dr. Benjamin Ide Wheeler, president of the University of California, gave at the University of Berlin during the winter of 1909-10.

1564. Monarchy and democracy in education. Unpopular review, 2: 356-71, October-December 1914.

Discusses the general question of college government, which "involves the relation of the boards of control to the president and the faculty, the relation of the president to the faculty, on the one hand, and to the student body on the other, with the result that the president becomes the official medium of communication between the governing body and the faculty." Deprecates this "triangular arrangement," which results in lack of harmony, and constant misunderstandings.

1565. **Segar, Mary.** Roger Bacon and the celebration at Oxford of the seventh centenary of his birth. Catholic world, 100: 48–55, October 1914.

1566. **Seldes, Gilbert V.** The changing temper at Harvard. Forum, 52: 521–30, October 1914.

Inveighs against the Harvard spirit. Says that within "the past three years the degeneration of every cultural activity has been persistently rapid." . . . "The college has failed to make intelligent activity the basis of democracy."

1567. **Spaulding, Thomas M.** Federal aid to military education in colleges. Education, 35: 107–14, October 1914.

Says that the standard universities and colleges afford a far better source of supply for the corps of army officers than do the majority of military schools.

1568. **Stokes, Anson Phelps.** Memorials of eminent Yale men; a biographical study of student life and university influences during the eighteenth and nineteenth centuries. New Haven, Yale university press, 1914. 2 v. ports. f°.

CONTENTS.—Vol. I, Religion and letters.—Vol. II, Science and public life.

1569. **Trade unionism in a university.** Unpopular review, 2: 347–55, October–December 1914.

Discusses in an interesting way the "so-called strike of the Wisconsin student workers union," and some of the social and economic questions involved.

1570. **Warnock, Arthur R.** Fraternities and scholarships at the University of Illinois. Science, 40: 542–47, October 16, 1914.

Draws the conclusion that the fraternity upperclassmen are "open to a charge that fraternity life engenders in the members a spirit of contentment with a grade of work somewhat lower than that of which the men are capable." Illustrated with interesting graphs.

SCHOOL ADMINISTRATION.

1571. **Chancellor, W. E.** County supervision: its status and betterment. American school board journal, 49: 11–12, 65, October 1914.

Discusses the difficulties in county supervision, the real needs and the things that can be done at once to better conditions.

1572. **Finegan, Thomas E.,** *ed.* Judicial decisions of the State superintendent of common schools, State superintendent of public instruction, State commissioner of education, from 1822 to 1913. Albany, N. Y., The University of the State of New York, 1914. 1508 p. 4°.

The editor has read the entire number of more than 12,000 decisions, and from these selected about 800 cases, which are of value in showing the historical development of the school system, and more particularly those which have a bearing upon the interpretation of the present law governing that system.

1573. **Smith, H. P.** A suggestive school-accounting system. Midland schools, 29: 36–40, October 1914.

The system here outlined is an illustration of how one district met a problem that is perplexing to many a school district, and solved it in an apparently satisfactory way.

SCHOOL MANAGEMENT.

1574. **Boulder county, Colorado, teachers' association.** Home study. Report of an investigating committee. Nebraska teacher, 17: 84, 86, September 1914.

"Under our present school system, home work, judiciously assigned and carefully checked, does not injure the health, mentality, or habits of study of children above the fourth grade."

1575. **Cooper, Clayton Sedgwick.** The examination octopus. Educational foundations, 26: 69–76, October 1914.

1576. **Coulter, Vincil C.** The redistribution of the content of some high-school courses. English journal, 3: 490–99, October 1914.

A paper read before the National council of teachers of English at St. Paul, July 9, 1914.

Briefly outlines a plan of distribution which "provides for all the significant material in the departments under discussion with a saving of time and a gain in unity of aim."

1577. **Folkestad, Svein.** Mannheimer-systemet eller klassedeiling etter arbeidsdug. Skolebladet, 17: 416–19, 427–30, September 5, 12, 1914.

1578. **Morehouse, Frances M.** The discipline of the school; with introduction by Lotus D. Coffman. Boston, New York [etc.] D. C. Heath & co. [1914] xviii, 342 p. 12°.

A classified bibliography: p. 305–11.

First deals with the general aspects of the situation, and with the theory of discipline; then takes up the concrete problems of school life and offers suggestions for their solution. Author believes that "fairly concrete means of achieving good results may be passed from one teacher to another."

SCHOOL ARCHITECTURE.

1579. The daylight illumination of schools. School world (London) 16: 342–47, September 1914.

Reprinted from the Illuminating engineer, July 1914. Describes the fundamental principles of lighting—physical and physiological. The first concerns light, climate, the building and its environment; the second, the visual apparatus of the workers and the subjective impression received.

1580. **Schoenfelder, L.** Schulhäuser in Dänemark. Schulhaus, 16: 382–86, heft 8, 1914.

A description of a system of school-buildings consisting of detached but communicating "pavilions." Illustrated with drawings of facades and floor plans.

SCHOOL HYGIENE AND SANITATION.

1581. **Anderson, Harry B.** Medical examination of school children a failure. Medical freedom (Chicago) 4: 11–16, September 1914.

1582. **Bridgeford, Edna G.** School nursing in second class cities. American education, 18: 79–82, October 1914.

"Read before the National convention on public health nursing, St. Louis, April 1914."

1583. **Cunningham, J. H.** Memorandum on the feeding of school children in Edinburgh. Educational news (London) 39: 764–66, August 21, 1914.
History of the movement.

1584. **Dadachanji, K. K.** Medical inspection of Parsi school children. Educational review (Madras, India) 20: 499–510, August 1914.

1585. **Greeley, Horace.** What the states and cities of the United States are doing in public health education work. American journal of public health, 4: 733–38, September 1914.

1586. **Hessler, Robert.** Dusty air in the school-room. [Buffalo, N. Y., 1914] 9 p. 8°.

From the Transactions of the fourth International congress on school hygiene, Buffalo, August 1913.

1587. **Mills, Lewis S.** Observing the health of school children at first hand. Normal instructor and primary plans, 23: 39. 73, 75, 38–39, 69, October, November, 1914.

"The subject of conserving the health of school children is one of utmost concern, and one that is occupying foremost attention among educators. Theories abound, but Mr. Mills in his two articles deals with actualities and no teacher can fail to be helped by his experiences. Conditions like these are far from uncommon, but, appalling as they are, they may be greatly alleviated . . ."—Editors.

1588. **O'Shea, M. V.** What to do with our dull children. Defective hearing, poor eyesight, difficult breathing are frequently the direct cause of dullness. Atlantic educational journal, 10: 13–14, September 1914.

1589. **Rao, C. R. N.** Medical inspection of schools. Educational review (Madras, India) 20: 485–91, August 1914.

A plea for the adoption in India of well-considered schemes of medical inspection of schools, after European models.

1590. **Reavis, W. C.** The relation between the physical and the health conditions of children and their school progress. Elementary school journal, 15: 96–105, October 1914.

A study that presents "a statement of the relationship that was found to exist in a certain city school, (1) between the physical condition of the children and their mental progress (a) as measured by standing in class, (b) as measured by completed work; (2) between the nutritional and developmental conditions of the children and their standing in class; (3) between physical defects, attendance, and class standing; (4) between the social status of the child and each of the above topics."

Illustrated by statistical diagrams and tables.

1591. **Skeele, Annie C.** Health problems and the normal school. American schoolmaster, 7: 297–302, September 1914.

1592. **Spence, Philip Sumner.** City school children healthier than country school children. Child-welfare magazine, 9: 45–49, October 1914.

From New York Times.

This article is based on the result of an investigation conducted by a committee on health problems of the National council of education, which has worked with the cooperation of a special committee of the American medical association. These committees have been studying for two years the health problems of the rural schools.

1593. **Stoneroad, *Dr.* Rebecca.** Health statistics of public school children of Washington, D. C., with special reference to grade, sex, and environment. [Buffalo, N. Y., 1914.] 10 p. 8°.

From the Transactions of the fourth International congress on school hygiene, Buffalo, August, 1913.

1594. **Williams, Edward Huntington.** Increasing your mental efficiency. New York, Hearst's international library co., 1914. 242 p. illus. 12°.

1595. **Wilson, R. H.** Oral hygiene. Oklahoma school herald, 22: 8–11. October 1914.

"The prime object of this article prepared by Dr. L. G. Mitchell, chairman state oral hygiene committee, and Mrs. Irma Matthews-McLennan and incorporated in the Oklahoma 'Course of study', is to teach the great need of prevention."

SEX HYGIENE.

1596. **Fender, Charles W.** Some experiments in the teaching of sex hygiene in a city high school. School science and mathematics, 14: 573–78, October 1914.

Gives the method used in teaching sex hygiene to boys of the Lowell high school, San Francisco, Cal. Also gives some of the results.

1597. **March, Nora H.** Training the instructors. Educational times (London) 67: 425–27, September 1, 1914.

Instruction in sex teaching; aim of work outlined is not to produce "sex specialists," but simply to give teachers a sensible grasp of "those aspects of child life of which they are usually ignorant."

1598. **Shields, Thomas Edward.** Sex instruction in the public schools. Catholic educational review, 8: 246–53, October 1914.

Discusses particularly an editorial which appeared in the September issue of Education.

EUGENICS.

1599. **Eugenics:** twelve university lectures, by Morton A. Aldrich, William Herbert Carruth, Charles B. Davenport [and others] with a foreword by Lewellys F. Barker. New York, Dodd, Mead and company, 1914. xiii p., 1 l., 348 p. illus. (charts.) 8°.

"The lectures contained in this volume were selected from among a number given in various universities and colleges throughout the country in the scholastic year of 1912–1913."

CONTENTS.—The eugenics programme and progress in its achievement, by C. B. Davenport.—Eugenics as viewed by the zoologist, by R. H. Wolcott.—Eugenics from the point of view of the physician, by V. C. Vaughan.—Eugenics as viewed by the physiologist, by W. H. Howell.—Eugenics: its data, scope and promise, as seen by the anatomist, by H. E. Jordan.—Eugenics from the point of view of the geneticist, by H. J. Webber.—The first law of character-making, by A. Holmes.—The eugenics movement from the standpoint of sociology, by C. A. Ellwood.—Eugenics and its social limitations, by A. G. Keller.—Selections from an address on eugenics, by W. H. Carruth.—Eugenics and economics, by M. A. Aldrich.—Eugenics: with special reference to intellect and character, by E. L. Thorndike.

1600. **Jewett, Frances Gulick.** The next generation; a study in the physiology of inheritance. Boston, New York [etc.] Ginn and company [1914] xii, 235 p. illus. 12°.

1601. **Saleeby, Caleb Williams.** The progress of eugenics. New York and London, Funk & Wagnalls company, 1914. 259 p. front. 8°.

PHYSICAL TRAINING.

1602. **Hetherington, Clark W.** The training of the physical educator and play director. Educational review, 48: 241–53, October 1914.

Gives a complete schematic summary, presented in chart form, of "all the important courses essential in a curriculum for the professional training of physical educators and play directors."

1603. **Olivet, Henry S.** Physical training in the normal school. Education, 35: 82–90, October 1914.

Gives the values of the various forms of physical exercise.

1604. **Small, Albion W.** The effects of intercollegiate athletics. Religious education, 9: 460–80, October 1914.

Appended, are digests of results obtained from requests sent out to athletic graduates.

PLAY AND PLAYGROUNDS.

1605. **Bevard, Katherine H.** School playground management. School journal, 81: 239–40, September 1914.

An account of the method employed at the Ross school, Washington, D. C.

1606. **Hetherington, Clark W.** The demonstration play school of 1913. Berkeley, University of California press, 1914. p. 241–88. 4°. (University of California publications. Education. vol. 5, no. 2, July 30, 1914)

A report to Prof. Charles H. Rieber, dean of the summer session of the University of California, on the Demonstration play school conducted during the summer session of 1913. "The play school is a school organization with its programme of activities and methods based on the central idea of uniting the spontaneous play-life of the child, who needs and desires leadership, with society's demand that he be instructed."

1607. **Patrick, G. T. W.** The psychology of play. Pedagogical seminary, 21: 469–84, September 1914.

References: p. 482–84.

SOCIAL ASPECTS OF EDUCATION.

1608. **Bland, Henry M.** David Starr Jordan and his message of peace. Education, 35: 77–81, October 1914.

"As the 'Apostle of peace,' President Jordan is strongly equipped to do the work of evangelization." Describes President Jordan's crusade against war.

1609. Building a civic center around a tri-city high school. Survey, 33: 65–66, October 17, 1914.

Work at La Salle-Peru township high school, La Salle, Ill.

1610. **Castagnola, G. Sapienza.** El cultivo del sentimiento de solidaridad en la escuela. Monitor de la educación común (Buenos Aires) 32: 17–33, July 1914.

An account of efforts in social education in Italy and France.

1611. **Ward, Edward J.** Remuneration for the social center secretary. Middle-West school review, 7: 5–7, October 1914.

The writer says that "for the civic, social, and recreational use of [school] buildings by adults and older youth to become general, there must be definite authorization and remuneration of the person who serves as civic secretary and director of recreation in each district."

CHILD WELFARE.

1612. **Casey, Frank.** Boy betterment and club work. Child (London) 4: 1040–47, September 1914.

Compton boys' club, London. Work among poor boys. Illustrated.

1613. **Flexner, Bernard** *and* **Baldwin, Roger N.** Juvenile courts and probation. New York, The Century co., 1914. 308 p. illus. 8°.

"Selected references": p. 292–98.

1614. **Key, Ellen.** The younger generation; tr. from the Swedish by Arthur G. Chater. New York and London, G. P. Putnam's sons, 1914. 270 p. 8°.

CONTENTS.—What the age offers and expects of youth.—2. Associated activity and self-culture.—3. The peace problem.—4. Youth, woman, and antimilitarism.—5. "Class badges."—6. The children's charter.—7. Recreative culture.—8. The few and the many.

MORAL EDUCATION.

1615. **Gillet, M. S.** The education of character. Tr. by Benjamin Green; with a preface by Rev. Bernard Vaughan, S. J. New York, P. J. Kenedy & son [1914] 164 p. 12°.

1616. **Johnson, Franklin Winslow.** The problems of boyhood. A course in ethics for boys of high-school age. Chicago, Ill., The University of Chicago press [1914] xxv, 130 p. 12°.

1617. **Powell, Lyman P.** Ethical study in our colleges. Churchman, 110: 466–67, October 10, 1914.

By the president of Hobart and William Smith colleges, Geneva, N. Y.

1618. **Tufts, James H.** Ethics in high schools and colleges. Teaching ethics for purposes of social training. Religious education, 9:454–59, October 1914.

RELIGIOUS EDUCATION.

1619. **Baker, James C.** The church and the state university. Methodist review (Nashville) 63:694–710, October 1914.

A general discussion of the growth of state universities, and of the religious status of their students, with a specific account of the work of Trinity Methodist Episcopal church at the University of Illinois.

1620. **Evans, Herbert Francis.** The Sunday-school building and its equipment. Chicago, The University of Chicago press, 1914. p. 151–224. illus., plans. 8°. (Biblical world, vol. 44, no. 3, September 1914)

MANUAL AND VOCATIONAL TRAINING.

1621. **Black, William W.** The place of manual training under the Indiana vocational educational law. Educator-journal, 15:55–60, October 1914.

1622. **Boshart, E. W.** The day vocational school. Manual training and vocational education, 16:65–73, October 1914.

The author says that "the ideal vocational day school should contain the two elements, the prevocational and the vocational, with such an intermingling of vocationalizing and liberalizing elements as will make for the most complete balance at the various stages of progress."

1623. **Kling, Arthur B.** Vocational schools and their field of work. The Multitude, 1:328–30, October 1914.

Vocational school movement in Illinois, and work of E. G. Cooley.

1624. **Seerley, Homer H.** The harmonizing of vocational and cultural education. American schoolmaster, 7:303–5, September 1914.

Paper delivered before the National council of education at St. Paul, Minn., July 6, 1914.

1625. **Taylor, Joseph S.** A handbook of vocational education. New York, The Macmillan company, 1914. xvi, 225 p. illus. 12°.

Topics: Industrial education in Europe. Industrial vs. manual training. The intermediate school. Continuation schools. The training of vocational teachers. Vocational guidance. Apprenticeship and compulsory education. Bibliography.

1626. **Vaughn, S. J.** Manual training equipments for village schools. American school board journal, 49:19–20, 60, October 1914.

"Mr. Vaughn has been supervisor of manual training in two important, small cities of the middle west, and has headed the manual-arts departments of two of the largest normal schools in the country. He has successfully planned scores of manual training equipments for villages and small cities thruout the north central states."—Editor's note.

VOCATIONAL GUIDANCE.

1627. **Brennan, John V.** The schools and vocational guidance. American schoolmaster, 7:289–96, September 1914.

1628. **Dougherty, N. F.** The relation of the school to employment. National association of corporation schools, Bulletin, 8:23–27, October 1914.

A paper read before the second annual convention of the National association of corporation schools, Philadelphia, June 1914.

1629. **Nutt, Hubert W.** What can psychology contribute to the solution of the problem of industrial education and vocational guidance? Teacher's journal, 14:143–52, October 1914.

1630. **Williams, George H.,** *ed.* Careers for our sons; a practical handbook to the professions and commercial life. 4th ed., rev. throughout and enl. London, A. and C. Black, 1914. 564 p. 12°.

FOLK HIGH SCHOOLS.

1631. **Dragehjelm, Hans.** Die dänische volkshochschule; eine geschichtliche aufklärung. Neue bahnen, 25: 495–505, August 1914.

"Two chief tendencies have for many years been predominant in Danish intellectual and cultural life. The one is the movement led by Grundtvig, the other is 'Brandesianism' [led by Brandes]. 'Brandesianism' claims the honor of having introduced modern intellectual and cultural life into Denmark, while the movement inspired by Grundtvig, in its origin and subsequent development, is decidedly national. 'Brandesianism,' which arose in the 'seventies, is a cult of the intellect,—the tendency represented by Grundtvig, on the other hand, aims at satisfying man as man, and above all at fulfilling the longing of his heart with regard to temporal as well as eternal concerns." p. 495–96.

The author then sketches the life work of Grundtvig, and in particular his conception of a free high-school for adults and the practical development of his plans. An institution at Elkhorn, Iowa, founded by Scandinavians in 1878, was designed to realize the aims of the Danish models.

1632. **Evans, Henry R.** What Denmark is doing for the Danes. New age, 21: 106–9, September 1914.

Describes the uplift work of the Danish folk high schools.

1633. **Foght, Harold W.** The Danish folk high schools. Washington, Government printing office, 1914. 93 p. plates. 8°. (U. S. Bureau of education. Bulletin, 1914, no. 22)

HOME ECONOMICS.

1634. **Williams, Jessamine Chapman.** The subject matter in home economics courses for high schools: factors determining the choice of subject matter in a laboratory course in foods. Manual training and vocational education, 16: 74–81, October 1914.

"Written from the point of view of one who has received the best scientific, as well as the best pedagogic instruction in household science, and has had a rich teaching experience."

COMMERCIAL EDUCATION.

1635. **Anderson, William L.** The stimulative and correlative value of a well-balanced course in commerce and industry. School review, 22: 505–10, October 1914.

Concluded from September number. Treats of the stimulative value of the proposed course. Says that work in commerce and industry, judged from the standpoint of psychology, would "compare favorably with many very valuable subjects. Judgment and reason are developed to a good degree in the study of the explanation (physical, political, and economic) of the geographic division of labor—the localization of industry," etc.

EDUCATION OF WOMEN.

1636. **Brown, Helen Dawes.** Talks to freshman girls. Boston and New York, Houghton Mifflin company, 1914. 90 p. 12°.

1637. **Evans, Mary Adelle.** How should secondary mathematics for girls differ from that for boys? Mathematics teacher, 7: 17–23, September 1914.

Thinks that "the difference in secondary mathematics for girls from that for boys lies in its applications, and is determined by their capabilities and opportunities and not by their sex."

1638. **Keech, Mabel L.** Our girls and their training. Education, 35: 95–97, October 1914.

Question of vocational education.

1639. **Muthesius, Karl.** Nicht "seminaristisch," sondern "wissenschaftlich." Pädagogische blätter, 43: 273–78, heft 6, 1914.

Traces the history of the present regulations governing the admission of women to the teaching profession and to the university. The author denies that there is a real and vital difference between the "normal" training given by the teachers' seminaries and by the higher schools, whose graduates are admitted to full academic standing at the universities. Both are "scientific" in the same sense.

1640. Die vorbereitung der mädchen auf das universitätsstudium. Pädagogische blätter, 43: 306–08, heft 6, 1914.

Presents the three courses open to women who wish to prepare for eligibility to positions as "oberlehrerin" and for university studies. The advantages and disadvantages of each are stated.

AFRICANS AND ORIENTALS.

1641. **Barton, Ernest D.** The findings of the continuation committee conferences in Asia on education. International review of missions (Edinburgh) 3: 670–82, October 1914.

Discusses the place of education in missionary work; and the aims of missionary education.

1642. **Wilkie, A. W.** *and* **Macgregor, J. K.** Industrial training in Africa. International review of missions (Edinburgh) 3: 742–47, October 1914.

Work of the Calabar mission of the United free church of Scotland.

EDUCATION OF DEAF.

1643. **Albaugh, Laura L.** Training the deaf child. Volta review, 16: 687–89, October 1914.

"Training in lip-reading should be begun as soon as deafness is discovered, though that be in very early childhood."

1644. **Ferreri, Guilio.** Notes on pedagogy and psychology in regard to the deaf. Volta review, 16: 719–21, October 1914.

Sixth article of a series. Deals with exercise and fatigue.

1645. The over-specialization of parents. Volta review, 16: 711–16, October 1914.

Discusses the attitude of parents to deaf children. Advocates a strong association of parents of the deaf in every state.

EDUCATION OF DEFECTIVES.

1646. **Cabot, Richard C.** Sub-standard workers. Survey, 33: 15–18, October 3, 1914.

Work of Dr. H. J. Hall, of Marblehead, Mass., who in 1895 established a workshop for neurasthenics. Patients are supervised and instructed by experts. They make articles that are salable and get wages for their products. Illustrated.

1647. **Goddard, Henry H.** School training of defective children. Yonkers-on-Hudson, N. Y., World book company, 1914. xxii, 97 p. illus. 8°. (School efficiency series, ed. by P. H. Hanus.)

Consists of Dr. Goddard's report—with some additions—on the "ungraded classes" of the New York city public school system, submitted in the New York city school inquiry, 1912.

LIBRARIES AND READING.

1648. **Aley, Robert J.** Books and high school pupils. Educator-journal. 15: 1–5, September 1914.

The writer thinks that a library is as necessary in a high school as a laboratory or a teacher, and that pupils should have the chance and the invitation to browse among the books. Gives some of the essentials of a high school library.

1649. **Koch, Theodore W.** The Bodleian library at Oxford. Library journal, 39: 739–46, 803–10, October, November 1914. illus.

1650. **Schaper, W. A.** The place of the public library in the administration of the city. National municipal review, 3: 672–81, October 1914.

Discusses among other things the relation of the public library to the free school system. Expansion of public libraries in our cities.

1651. Supplementary reading in the grades—a symposium. Sierra educational news, 10: 490–96, September 1914.

Contains lists for supplementary reading for the first five grades.

1652. **Wilson, Martha.** School library management. [St. Paul] Department of education, 1914. 16 p. 8°.

Reprinted from the Manual for consolidated schools in Minnesota, 1914.

BULLETIN OF THE BUREAU OF EDUCATION.

[NOTE.—With the exceptions indicated, the documents issued below will be sent free of charge upon application to the Commissioner of Education, Washington, D. C. Those marked with an asterisk (*) are no longer available for free distribution, but may be had of the Superintendent of Documents, Government Printing Office, Washington, D. C. upon payment of the price stated. Remittances should be made in coin, currency, or money order. Stamps are not accepted. Documents marked with a dagger (†) are out of print.]

1906.

†No. 1. Education bill of 1906 for England and Wales as it passed the House of Commons. Anna T. Smith.
†No. 2. German views of American education, with particular reference to industrial development. William N. Hailmann.
*No. 3. State school systems: Legislation and judicial decisions relating to public education, Oct. 1, 1904, to Oct. 1, 1906. Edward C. Elliott. 15 cts.

1907.

†No. 1. The continuation school in the United States. Arthur J. Jones.
†No. 2. Agricultural education, including nature study and school gardens. James R. Jewell.
†No. 3. The auxiliary schools of Germany. Six lectures by B. Maennel.
†No. 4. The elimination of pupils from school. Edward L. Thorndike.

1908.

†No. 1. On the training of persons to teach agriculture in the public schools. Liberty H. Bailey.
*No. 2. List of publications of the United States Bureau of Education, 1867-1907. 10 cts.
*No. 3. Bibliography of education for 1907. James Ingersoll Wyer, jr., and Martha L. Phelps. 10 cts.
†No. 4. Music education in the United States; schools and departments of music. Arthur L. Manchester.
*No. 5. Education in Formosa. Julean H. Arnold. 10 cts.
*No. 6. The apprenticeship system in its relation to industrial education. Carroll D Wright. 15 cts.
*No. 7. State school systems: II. Legislation and judicial decisions relating to public education, Oct. 1, 1906, to Oct. 1, 1908. Edward C. Elliott. 30 cts.
*No. 8. Statistics of State universities and other institutions of higher education partially supported by the State, 1907-8. 5 cts.

1909.

*No. 1. Facilities for study and research in the offices of the United States Government in Washington. Arthur T. Hadley. 10 cts.
*No. 2. Admission of Chinese students to American colleges. John Fryer. 25 cts.
*No. 3. Daily meals of school children. Caroline L. Hunt. 10 cts.
†No. 4. The teaching staff of secondary schools in the United States; amount of education, length of experience, salaries. Edward L. Thorndike.
No. 5. Statistics of public, society, and school libraries in 1908.
*No. 6. Instruction in the fine and manual arts in the United States. A statistical monograph. Henry T. Bailey. 15 cts.
No. 7. Index to the Reports of the Commissioner of Education, 1867-1907.
*No. 8. A teacher's professional library. Classified list of 100 titles. 5 cts.
*No. 9. Bibliography of education for 1908-9. 10 cts.
No. 10. Education for efficiency in railroad service. J. Shirley Eaton.
*No. 11. Statistics of State universities and other institutions of higher education partially supported by the State, 1908-9. 5 cts.

1910.

*No. 1. The movement for reform in the teaching of religion in the public schools of Saxony. Arley B. Show. 5 cts.
No. 2. State school systems: III. Legislation and judicial decisions relating to public education, Oct. 1, 1908, to Oct. 1, 1909. Edward C. Elliott.
†No. 3. List of publications of the United States Bureau of Education, 1867-1910.
*No. 4. The biological stations of Europe. Charles A. Kofoid. 50 cts.
†No. 5. American schoolhouses. Fletcher B. Dresslar.
†No. 6. Statistics of State universities and other institutions of higher education partially supported by the State, 1909-10.

1911.

*No. 1. Bibliography of science teaching. 5 cts.
*No. 2. Opportunities for graduate study in agriculture in the United States. A. C. Monahan. 5 cts.
*No. 3. Agencies for the improvement of teachers in service. William C. Ruediger. 15 cts.
*No. 4. Report of the commission appointed to study the system of education in the public schools of Baltimore. 10 cts.
*No. 5. Age and grade census of schools and colleges. George D. Strayer. 10 cts.
*No. 6. Graduate work in mathematics in universities and in other institutions of like grade in the United States. 5 cts.
†No. 7. Undergraduate work in mathematics in colleges and universities.
†No. 8. Examinations in mathematics, other than those set by the teacher for his own classes.
No. 9. Mathematics in the technological schools of collegiate grade in the United States.
†No. 10. Bibliography of education for 1909–10.
†No. 11. Bibliography of child study for the years 1908–9.
†No. 12. Training of teachers of elementary and secondary mathematics.
*No. 13. Mathematics in the elementary schools of the United States. 15 cts.
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*No. 6. Agricultural instruction in high schools. C. H. Robison and F. B. Jenks. 10 cts.
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*No. 22. Bibliography of industrial, vocational, and trade education. 10 cts.
*No. 23. The Georgia Club at the State Normal School, Athens, Ga., for the study of rural sociology. E. C. Branson. 10 cts.
*No. 24. A comparison of public education in Germany and in the United States. Georg Kerschensteiner. 5 cts.
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No. 55. Legislation and judicial decisions relating to education, October 1, 1909, to October 1, 1912. James C. Boykin and William R. Hood.
†No. 56. Some suggestive features of the Swiss school system. William Knox Tate.
No. 57. Elementary education in England, with special reference to London, Liverpool, and Manchester. I. L. Kandel.
No. 58. Educational system of rural Denmark. Harold W. Foght.
No. 59. Bibliography of education for 1910-11.
No. 60. Statistics of State universities and other institutions of higher education partially supported by the State, 1912-13.

1914

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No. 4. The school and the start in life. Meyer Bloomfield.

No. 5. The folk high schools of Denmark. L. L. Friend.
No. 6. Kindergartens in the United States.
No. 7. Monthly record of current educational publications, March, 1914.
No. 8. The Massachusetts home-project plan of vocational agricultural education. R. W. Stimson.
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*No. 10. Physical growth and school progress. B. T. Baldwin. 25 cts.
No. 11. Monthly record of current educational publications, May, 1914.
No. 12. Rural schoolhouses and grounds. F. B. Dresslar.
No. 13. Present status of drawing and art in the elementary and secondary schools of the United States. Royal B. Farnum.
No. 14. Vocational guidance.
No. 15. Monthly record of current educational publications. Index.
No. 16. The tangible rewards of teaching. James C. Boykin and Roberta King.
No. 17. Sanitary survey of the schools of Orange County, Va. Roy K. Flannagan.
No. 18. The public school system of Gary, Ind. William P. Burris.
No. 19. University extension in the United States. Louis E. Reber.
No. 20. The rural school and hookworm disease. J. A. Ferrell.
No. 21. Monthly record of current educational publications, September, 1914.
No. 22. The Danish folk high schools. H. W. Foght.
No. 23. Some trade schools in Europe. Frank L. Glynn.
No. 24. Danish elementary rural schools. H. W. Foght.
No. 25. Important features in rural school improvement. W. T. Hodges.
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No. 32. Bibliography of the relation of secondary schools to higher education. R. L. Walkley.
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